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Organizational Performance Assessment System through Integrated Measurement Models in Moroccan Public Higher Education: A Cross-sectional Mixed-Method Study

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Dedication

On the eve of this thesis initiation, I lost my dear father; peace be upon his soul. In the mid of this study, my mother was affected by a chronic disease and went through three years of painful treatments before recovering. Intense moments like these break the inquisition's focus and pace and let the research sequence slip through the investigator's fingers. Unless tremendous determination and burning passion had accompanied this fluctuating experience, its achievement would have been extremely tedious, if not utterly impossible. In the meantime, challenging occurrences like these did bring the best of the researcher whose concern was mainly on the work's quality rather than its termination speed.

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تم إدخال الإدارة القائمة على الأداء في التعليم العالي العام في المغرب كجزء لا يتجزأ من التخطيط الاستراتيجي الوطني المتعلق بمأسسة وإدارة نظام تقييم الأداء في الإدارة التربوية. في هذا السياق، بالإضافة إلى تدقيق الدولة ورقابتها على الجامعات، فقد تم إقرار قياس الأداء الداخلي كممارسة تنظيمية إلزامية لتشكيل استراتيجيات لإدارة التغيير وضمان التحديث المستمر للتعليم وجودة الخدمة. في غضون ذلك، فإن القضايا المرتبطة بالتخطيط الاستراتيجي، وممارسات الحوكمة، والإجراءات الإدارية، وتدريب الموارد البشرية، ومراقبة الجودة، والموارد المادية، والتطبيقات الأكاديمية وما إلى ذلك، تثير التساؤل حول اعتماد وتنفيذ نماذج متكاملة لتقييم الأداء. كما أن هذه الإشكاليات تؤثر في مؤسسات التعليم العالي التي تراقب أدائها باتباع أطر تقييم منهجية. بناء على ذلك، تجري هذه الرسالة البحثية دراسة تجريبية باستخدام أربعة مقاييس صالحة للأداء وهي MLQ 5x وOCAI وTQM وBSC لفحص تعميم نماذج القياس هذه، والتحقق في تأثير عوامل معينة على متغير الأداء المؤسسي، وتحليل أبعادها المتعددة في السياق الوطني للتعليم العالي.

تم تصميم منهجية الأطروحة بناءً على نهج الأساليب المختلطة (المندمجة) المقطعية التي تنتقل من الأساليب الكمية إلى الأساليب النوعية/الكيفية لجمع البيانات وفحصها وتفسيرها باتباع التصميم التسلسلي التوضيحي. بناء على ذلك، تم توزيع استبيانات مقطعية شبه منظمة وتنظيم مقابلات شبه منظمة لجمع بيانات البحث من 807 من كبار التنفيذيين والمديرين المتوسطين والإداريين والمؤوسين في ثلاث جامعات من القطاع العام. لتحليل البيانات، تم تشغيل نمذجة المعادلات الهيكلية بالمربعات الصغرى الجزئية (SEM-PLS) من خلال برنامج Smart-PLS 3 لمعالجة البيانات المجمعة من الاستبيانات، بينما شكل النمط التحليلي الموضوعي مخططاً لمعالجة البيانات النوعية وتحليلها في هذه الدراسة. تم إدخال تقنيات التثليث (Triangulation) خلال مراحل إعداد المنهجية وجمع البيانات لمراعاة اتساق النتائج من كلتا الطريقتين. أشارت النتائج التجريبية إلى أنه على الرغم من هيمنة النمط التعامل (Transactional)، فإن القيادة التحويلية (Transformational) تولد المزيد من الموافقة من جانب الموظفين الذين يسعون إلى فعالية القيادة. فيما يتعلق بإدارة الجودة الشاملة (TQM)، هناك دليل على أن التعليم العالي في المغرب لا يرقى إلى مستوى متطلب التطبيق المالي. تبرز النتائج هيمنة ثقافة العشيرة/المجموعة (clan) والثقافات الهرمية (Hierarchy)، والتي تمثل الأسلوب الهجين والأساليب الانتقائية والتي تتطلب بدورها إعادة تعريف هيكل التسلسل الهرمي وإعادة النظر في مدى وجوانب تنفيذه. وتؤكد ما تم الكشف عنه من المشاركين عن ندرة التقييم الذاتي المنهجي حيث تبين أن 25٪ فقط من مؤسسات التعليم العالي التي شملتها الدراسة تتبنى وتنفذ بعض النماذج المتكاملة لقياس تقييم الأداء الداخلي.

Abstract

In Morocco, in public higher education, performance-based management has been introduced as an integral part of the national strategic planning relative to the institutionalization and administering of the performance assessment system within educational management. In this vein, in addition to the state auditing and oversight of universities, the internal performance measurement has been settled as an imperative organizational practice to form strategies for change management and to warrant an ongoing upgrade of education and service quality. In the meanwhile, sizeable issues coreferent with strategic planning, governance practices, administrative procedures, HR training, quality control, material resources, academic applications, etc., call into question the adoption and execution of integrated models of performance assessment. They also account for the handful of HEIs that keep track of their achievements following systematic evaluation frameworks. On that account, this dissertation undertakes empirical research using four valid measures of performance, namely, MLQ 5x, OCAI, TQM, and BSC, to dissect the mainstreaming of these measurement models, investigate the impact of particular factors on organizational performance variable, and break down its multidimensional embodiments in tertiary education in the national context. The thesis methodology has been architected based on the cross-sectional mixed-methods approach that shifts from the quantitative to qualitative methods of data collection, examination, and interpretation following the explanatory sequential design. On that account, cross-sectional semi-structured questionnaires and semi-structured interviews have been deployed to collect the research data from 807 senior executives, middle managers, administrators, and subordinates in three public universities. For data analysis, the structural equation modeling-partial least square (SEM-PLS) has been operationalized through Smart-PLS 3 software to process collated data from questionnaires, while the thematic analytical pattern has constituted the blueprint for this study's qualitative data processing and analysis. Triangulation techniques have been inserted through the methodological and data collection phases to account for the consistency of both methods' findings. The empirical findings evoked that despite the dominance of transactional pattern, transformational leadership generates more consent and approval on the part of the employees who seek leadership effectiveness. In regard to TQM, there is an empirical evidence that higher education in Morocco falls short of the financial application requisite. The findings bring forth the dominance of the clan and hierarchy cultures, which accounts for the hybrid style and eclectic methods that require a redefining of the hierarchy structure and a reconsideration of the extent and aspects of its implementation. The revelations confirm that only 25 % of the surveyed HEIs adopt and implement integrated models of performance assessment measurement.

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List of Abbreviations and Acronyms

PDD	: Power Distance Dimension
UAD	: Uncertainty Avoidance Dimension
IDVD	: Individualism Versus Collectivism Dimension
MAS	: Masculinity Versus Femininity Dimension
LTOD	: Long-Term Versus Short-Term Orientation Dimension
IND	: Indulgence Versus Restraint Dimension
PMM	: Performance Measurement Matrix
PMQ	: Performance Measurement Questionnaire
PP	: Performance Prism
SMART	: The Strategic Measurement Analysis and Reporting Technique Pyramid
EFQM	: European Foundation for Quality Management
IPMS	: Integrated Performance Measurement System
RDF	: The Results and Determinants Framework
MLQ	: The Multifactor Leadership Questionnaire
OCAI	: The Organizational Culture Assessment Instrument
TQM	: The Total Quality Management
HEIs	: Higher Educational Institutions
PLS-SEM	: Partial Least Square – Structural Equation Modeling
AVE	: Average Variance Extracte
VIF	: Variance Inflation Factor
Gof	: Goodness of Fit of the Model
TQM	: Emergent Themes: Total Quality Management
BSC	: Balance Scorecard
IIB	: Idealized Influence Behaviours
IIA	: Idealized Influence Attributed
IS	: Intellectual Stimulation
IC	: Individualized Consideration
IM	: Inspirational Motivation
GLOBE	: Global Leadership and Organizational Behavior Effectiveness

Introduction

Morocco has engaged in a relentless process to improve the tertiary education system. The pressing factors of this upgrade emanate from the resonant percussions that education bears on the country's socio-economic fabric. Accordingly, employment rate, poverty ratio, job market demand, scientific research growth, the national GDP indicator of the state expenditures on education, etc., are extremely sensitive indices to how higher education performance key indicators develop. Therefore, a sizeable part of the development strategy has sought to establish concrete performance management policies and performance assessments since the reforms in 2002 (Llorent-bedmar, 2014). These schemes were developed to achieve a quantitative and qualitative breakthrough in education and related administrative services. Since then, public universities have been facing tremendous pressure to introduce in-depth changes to operate these programs. The core alterations implicate a structural remodeling of the centralized system of governance into a more self-sustaining management mode that extends more autonomy to the universities' senior executives and governing boards to administer financial, academic, and governance affairs. Meanwhile, the state's partial relinquishment of its governing powers has been compensated by extensive supervisory and control systems. On that account, government agencies adhere HEIs to symmetrical auditing. The outcome from these external inspections serve to link responsibility with accountability and to provide an estimation of the national pattern of educational management autonomy. Equally consequential to monitoring performance, the internal or self-assessment has been laid out as an underlying practice that universities must operationalize within the autonomous government's scope. Nonetheless, undertaking integrated performance measurement in higher educational institutions remains an unresolved issue. It is still undergoing numerous difficulties associated in a considerable part with the problems of the standardization of the methods of performance measurement and the internalization of the culture of self-appraisal within HEIs. What is more, additional issues are coreferent either with the unsystematic implementations of some quantification approaches or the utter absence of the required resources to conduct internal auditing. Therefore, unless sufficient resources are allocated, higher education would not succeed in implementing the performance assessment system and would not be placed on excellence.

In order to conduct holistic accounts within HEIs, it is indispensable to implement multi-dimensional approaches that encompass the most fundamental factors affecting performance. In the context of this study, it has been deemed that no discrete metric or index can provide a detailed quantification of the miscellaneous facets of performance. This is in line with Kirchhoff's (1977) call for the embracing and adoption of multiple variables models of

performance measurement instead of a single variable paradigm. On that account, this study initiates an exhaustive measurement model that identifies four integral components, namely, organizational culture (OCAI), leadership style (MLQ 5x), quality management (TQM), and balanced scorecard (BSC) for a multi-perspective analysis of universities. The appraisal of these four metrics is deemed substantive to conduct an all-inclusive intrinsic evaluation of HEIs.

1 Problem Statement

Despite the unremitting revisions of the reforms' strategies, the issue of performance assessment is viewed as a major obstruction to the promotion of the whole system and a leading factor to the critical situation of higher education. In this regard, Bounahai (2014) recognizes the low performance and the restricted contribution of the sector of education to the development of the economy of the kingdom. The core problem related to the national academic research resides in its disregard of this hitherto unexplored subject area and its categorical focus on themes related to teacher-student performance evaluation, and curricula design and content effectiveness. Therefore, this study raises the thorny issue of university performance assessment, starting from the investigator's conviction that research should be reoriented towards institutional evaluation. It should ponder on the executive management decisions and actions with all the exerted top-down effects on the integrality of the organization. Meanwhile, several issues have been spotted in the current study:

- *Leadership Style* - It is not clear how leadership behaviours and managerial practices are gauged among these institutions. This brings into focus the noticeable paucity of the empirical research that accounts for Moroccan managers' behaviors in higher education (Lekchiri et al., 2018). In the meanwhile, a comprehensive study of the Moroccan leadership has been conducted by Hofstede (2010), who concludes that leadership is hierarchical, autocratic, procedural, collectivistic, masculine, normative, and restraint. Similarly, another international investigation has involved Morocco as it delves into the characteristics of leaders. Therefore, House et al., (2004) in their GLOBE study, confirm that Moroccans perceive an effective leadership profile as participative and team-oriented. They regard charismatic and humane-oriented as positive attributes that contribute to the construction of an outstanding portrait of leadership. On the flipside, they consider autonomous and self-protective as real impediments to effective leadership. However, the depictions of both studies remain quite generic, and touch upon a variation of sectors and are not specific to higher education. This study endeavors to fill this vacuum by carrying out internal evaluations of leaders' styles and practices that bear on performance in HEIs.

• *Organizational Culture* - Secondly, the parameters of the prevalent organizational cultures and their effects on HEIs remain quite ambiguous just as their methods of detection are so blurry or inexistent in so many cases. The leadership visions and goals linked to the work environment in faculties and public universities are barely accounted for in any quarterly, semestrial, or annual reports of performance. While there is scarce empirical research analyzing the features of organizational culture in Moroccan tertiary education, Hofstede's (2010) findings have characterized Moroccan culture as hierarchical, rule-oriented, collectivistic, masculine, normative, and a restraint country with high uncertainty avoidance. In the same vein, the GLOBE study aligns Moroccan culture with aggressiveness, confrontation, competition, controlling the environment, and progress. While the previously discussed studies rate and categorize Moroccan culture according to predetermined sets of criteria, their findings do not necessarily lay bare the defining features of the work environment in tertiary institutions.

• *Total Quality Management* - Thirdly, quality management achievements are the most conspicuous concretizations within universities. Indeed, financial, academic, and governance embodiments of autonomy can readily be perceived in how HEIs have recently been managed. In this respect, Bencheikh & Elabbadi (2013) underscore the substantial contribution of TQM manifestations of autonomy as introduced by the Emergency Plan as well as the major TQM supportive organizational infrastructure such as management control system in Moroccan HE. Internal Governing boards have been enabled extended powers to take strategic decisions with less confinement to the higher authorities. Nonetheless, the assessment of quality management strategies is still unclear or not undertaken at all due to financial, procedural, and HR hurdles. On that account, TQM has been proposed in this study as a valid instrument of assessing quality management practices in universities.

• *Balanced Scorecard* - Fourthly, most universities that weigh their performance carry through a unidimensional model of measurement that is more likely to overlook integrant performance indices. Most of the measurement paradigms are concerned either with financial or non-financial metrics, which accounts for the insufficiency and inadequacy of such single-sided models in depicting the big picture of institutional performance. The integrality of the performance management system requires an effective method of evaluation. Correspondingly, seeing the absence of a unified instrument for the quantification of the financial and non-financial performance within higher educational institutions, the BSC paradigm is suggested for the execution of the

self-assessment of organizational performance from a variety of perspectives that lack in the previous paradigms. While there is a little or no evidence of the systematic implementation of BSC in Moroccan public universities, it is advocated in this thesis due to its evaluative power and its worldwide contribution to the elaboration of the strategic planning and formulation of the universities' visions.

In addition to the preceding issues, it is not clear whether these four indicators can account for organizational performance with a direct bearing or that; there is a need for other intervening antecedents to translate their effects. Thus, the critical problem dissected in the conceptual framework lies in the missing liaisons between the four measures and organizational performance. On that account, two indirect correlations are postulated to examine whether the four factors are sufficient to affect performance or that job satisfaction and organizational commitment should intervene to substantiate such effects. Meanwhile, the inspection of job satisfaction in the Moroccan context is quite a rarity (El Mossati et al., 2016) in the same way that organizational commitment has seldomly been explored. Most of the relevant research leaves open interrogations regarding all the previously mentioned correlations and means of assessments. Therefore, this dissertation calls into question the striking dearth of empirical research in the area of university performance. It aligns the national experience of higher education sizing with the international framework seeking to adopt and implement the operative methods and strategies of performance assessment within universities.

2 Objective and Purpose of the Study:

This dissertation undertakes empirical research using four valid measures of performance namely, MLQ 5x, OCAI, TQM, and BSC to dissect the mainstreaming of these measurement models, investigate the impact of particular factors on organizational performance variable, and decorticate its multidimensional embodiments in tertiary education in the national context. On that account, this study has been designed and carried out with the objective of undertaking correlational and descriptive analyses of the researched phenomena. Accordingly, this thesis aims at examining and delineating the causal process that accounts for the relationships between the three independent constructs organizational culture, leadership style, and total quality management, and the dependent variable organizational performance in Moroccan tertiary education. Thus, the reason for shedding light on these associations is to elucidate the direct causal liaisons that explain the change and influence (effect) of the three predictors (causal variables) on the outcome variable. This entails the explanatory purpose and nature of this type of research that goes into cause-effect relationships (Yin, 1994). In the meantime, the overall conceptual framework of this study has been elaborated with the contribution of two intervening

variables to account for the indirect impact and relationships between the above-mentioned antecedents. In this regard, job satisfaction and organizational commitment have been integrated into the mediation model that postulates the indirect influence of these two mediators on the relationships between the predictors and the outcome variable. It is worth mentioning that these correlations have been posited and researched without any systematic manipulation and control of the variables. The focus is on comprehending, describing, and predicting associations between factors rather than controlling them or bringing forth causes. Finally, this study seeks to provide in-depth elucidations of the descriptive outcomes to explicate the correlations between variables. The ensuing objective is to identify the adequate measurement models applied in public universities to assess internal performance.

3 Research Questions

Nine main research questions and two mediation questions have been suggested in the context of this study:

Main Research Questions:

Organizational Culture:

- What are the dominant **organizational cultures** in Moroccan higher education?
- How does **organizational culture** affect **organizational performance** in Moroccan tertiary education (direct effect)?

Leadership Style:

- What are the dominant **leadership styles** in Moroccan universities?
- How does the dominant **leadership style (s)** affect **organizational performance** in Moroccan tertiary education (direct effect)?

Total Quality Management:

- To what extent are Moroccan universities able to implement the three major applications of **TQM** *financial, academic, and administrative* reforms (in light of the economic, managerial, and human resources constraints)?
- How does **Total Quality Management** affect **organizational performance** in Moroccan tertiary education (direct effect)?

Mediation Research Questions:

- Job satisfaction: Does job satisfaction mediate the relation of organizational culture, leadership style, total quality management and organizational performance (indirect effect)?
- Organizational commitment: Does organizational commitment mediate the relation of organizational culture, leadership style, total quality management and organizational performance (indirect effect)?

4 Conceptual Framework:

For the schematization of the correlations between the underlying variables of this study, a conceptual framework has been elaborated based on the relevant literature and the empirical findings of international research. It provides an overall summary of the causal paradigm that depicts the interconnections between the four independent variables (IVs) and the dependent variable (DV) of this thesis. On that account, it gives a depiction of the liaisons between organizational culture, leadership style, total quality management, and balanced scorecard as they bear upon the organizational performance of the Moroccan public universities.

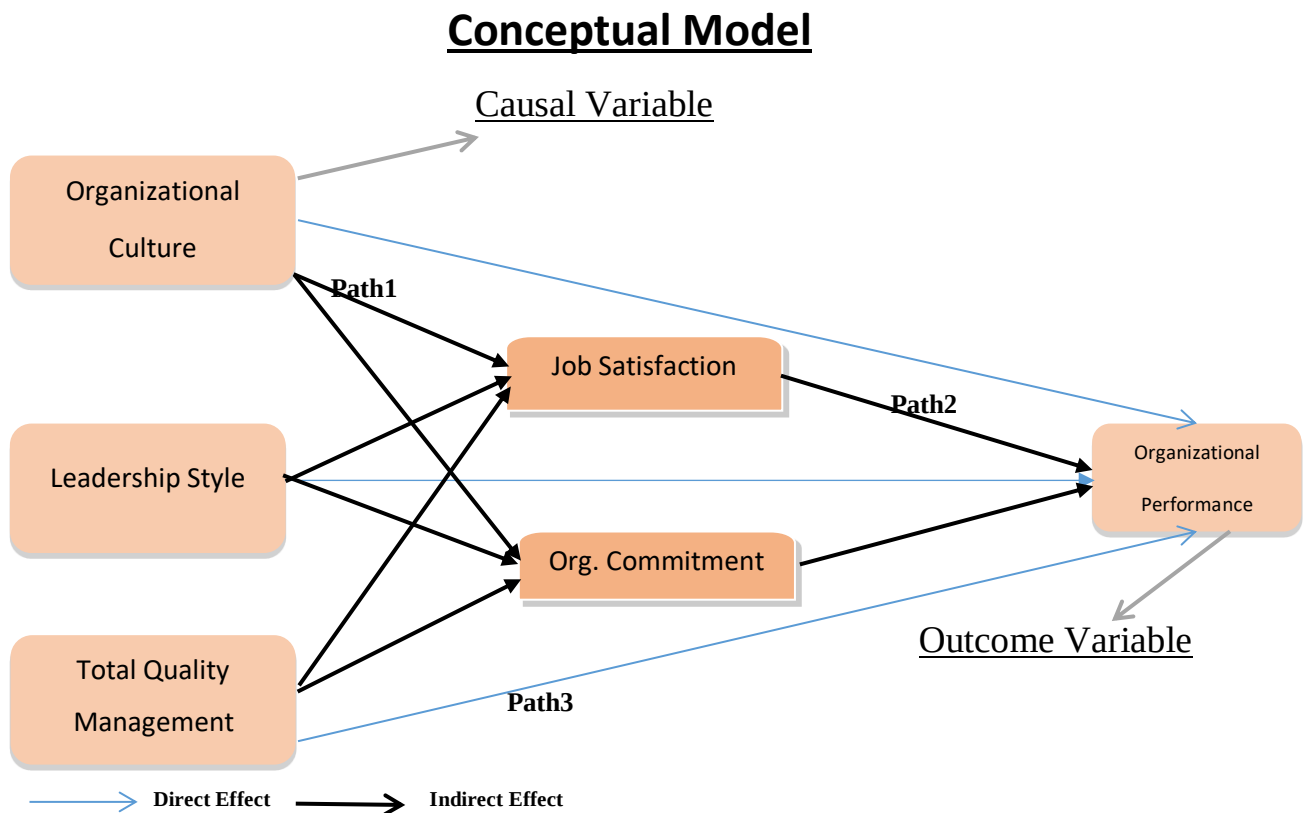


Figure 1: The research Conceptual Framework

It is worth stressing that this conceptual framework sheds light on the direct effect that the independent (causal) variables have on the dependent (outcome) variable to account for how the latter is affected by the former. Meanwhile, the researcher deems it very necessary to incorporate other mediating variables (intervening variables) to illustrate the meditational mechanisms accounting for the indirect effect of the causal variable and the outcome variable. These are job satisfaction and organizational commitment. The diagram introduces the multiple mediation model of the present study, which refers to the intervention of numerous mediators in the relationships between the independent variable and the dependent variable.

Thus, it proposes four causal (independent) variables exerting an indirect effect on the outcome (dependent) variable through the medium of two mediators (intervening variables). Therefore, there exist three paths among different variables:

1. A path between the independent (causal) variables and the mediators
2. A path between the mediators and the dependent (outcome) variable
3. A path between the independent variables and the dependent variable

This denotes that the two mediators (job satisfaction and organizational commitment) serve to break down the causal chain involving all the variables. Baron & Kenny (1986) go into details on what are the necessary causal steps that warrant mediation. They recommend the implementation of the following analysis or procedure:

- The predictor (causal variable) exerts significant influence on the mediator (path1).
- The predictor exerts significant influence on the outcome variable in default of the mediator (path2).
- The mediator exerts significant influence on the outcome variable (path3).
- The predictor should no more be able to exert any influence on the dependent in order to ensure complete/full mediation.

Accordingly, this model posits that the incorporation of other variables to account for the relationship between the independent and dependent variables would pave the way for systematic and comprehensive interpretation of the causal process entailing the three types of variables. The correlational analysis of this thesis delves into detailed explications of the interrelations between all the variables to investigate the assumed positive-negative impacts on organizational performance to account for the research hypotheses and research questions.

5 Research Hypotheses

Main Hypotheses:

This study suggests seventeen main hypotheses and four mediation hypotheses as follows:

Leadership Style:

- *Hypothesis 1:* The **transformational** practice will lead to a **positive** perception of **leadership style**, which affects employees' performance favourably.
- *Hypothesis 2:* The **transactional** practice will lead to a **negative** perception of **leadership style**, which affects employees' performance unfavourably.
- *Hypothesis 3:* **non-Transactional leadership (laissez-faire)** practice will lead to a negative perception of **leadership style**, which affects employees' performance unfavourably.
- *Hypothesis 4:* **Effectiveness** will lead to a **positive** perception of **leadership style**, which affects employees' performance favourably.
- *Hypothesis 5:* The adoption of adequate **leadership style** will lead to **higher job satisfaction** among employees.
- *Hypothesis 6:* The adoption of adequate **leadership style** will lead to a **higher commitment** of the employees to their organization.

Total Quality Management:

- *Hypothesis 7:* **Financial applications** will have a **negative** effect on **Total quality management** implementation in Moroccan higher education.
- *Hypothesis 8:* **Academic applications** will have a **positive** effect on **Total quality management** implementation in Moroccan higher education.
- *Hypothesis 9:* **Administrative applications** will have a **positive** effect on **Total quality management** implementation in Moroccan higher education.
- *Hypothesis 10:* The implementation of **Total quality management** will lead to **higher job satisfaction** among employees.
- *Hypothesis 11:* The implementation of **Total quality management** will lead to a **higher commitment** of the employees to their organization.
- *Hypothesis 12:* **high Job Satisfaction** affects **organizational performance** positively.
- *Hypothesis 13:* **high Organizational Commitment** affects **Organizational Performance** positively.

Organizational Culture:

- **Hypothesis 14:** A **Clan culture** type in Moroccan universities will exert a **positive** effect on organizational performance.
- **Hypothesis 15:** An **Adhocracy culture** type in Moroccan universities will exert a **positive** effect on organizational performance.
- **Hypothesis 16:** A **Market culture** type in Moroccan universities will exert a **positive** effect on organizational performance.
- **Hypothesis 17:** A **Hierarchy culture** type in Moroccan universities will exert a **negative** effect on organizational performance.

Mediation Hypotheses:

- **Hypothesis 18:** **Job satisfaction** *mediates* the relation between **leadership style** and **organizational performance**.
- **Hypothesis 19:** **Organizational commitment** *mediates* the relation between **leadership style** and **organizational performance**.
- **Hypothesis 20:** **Job satisfaction** *mediates* the relation between **total quality management** and **organizational performance**.
- **Hypothesis 21:** **Organizational commitment** *mediates* the relation between **total quality management** and **organizational performance**.

6 Variables Operationalization:

The synopsis of the integrality of the research variables and the corresponding operational indicators are as follows:

Independent Variable:

- **Organizational Culture:** clan culture, market culture, adhocracy culture, and hierarchy culture.
- **Leadership Style:** transformational leadership, transactional leadership, laissez-faire (non-transactional) leadership, and effectiveness.
- **Total Quality Management:** financial applications, academic applications, and governance applications.

Dependent Variable:

- **Organizational Performance:** financial perspective, customer perspective, internal processes, and learning and growth perspective.

Mediating (intervening) Variable:

- **Job Satisfaction and Organizational Commitment.**

7 Research Design and Methodology :

This thesis undertakes a systematic inquisition of higher education performance from four controlling perspectives. The proposed antecedents are embodied in four significant performance manifestations assessment:

1. The executive power that the leaders exercise as part of educational management and which reflects in the effectiveness of their higher educational institutions.
2. The organizational climate that reigns and becomes a primary determinant of the stakeholders' level of satisfaction, commitment, and achievement.
3. The implemented policies of quality management, which affect quality service and education.
4. The application of financial and non-financial approaches for the assessment of the overall performance of the Moroccan public universities.

The researcher has sought to tackle the above-outlined research phenomena through the deployment of a cross-sectional mixed-methods approach. This has been planned in line with the thorough empirical literature that theorizes on the integral use of a holistic research methodology that strikes a balance between qualitative and quantitative methods of data collection, analysis, and interpretation.

Therefore, the cross-sectional mixed methods study is a very convenient observational type of research approach that crosses various sections through the fusion of quantitative and qualitative means of collecting and analyzing data. This process yields mingled inferences about a given population at a particular point in time (Riegel et al., 2010). Cross-sectional mixed methods studies are usually designed to deal with intricate research problems whose examination and exploration cannot be undertaken from a one-unit perspective, either quantitative or qualitative. Creswell (2012) supports the significant implications of applying both methods on the provision of insights to the research questions and problems.

This thesis research philosophy has been configured based on the pragmatic paradigm that underpins the proposed cross-sectional mixed methods methodology. In this research, pragmatism allows for a sequential (rather than parallel or simultaneous) integration of quantitative and qualitative approaches to address the research questions. Therefore, the pragmatic choice tolerates the intermingling of the post-positivistic-quantitative method as well as the constructivistic- qualitative method in a sequentially designed procedure. Thus, an explanatory sequential design has been followed throughout the research. Cross-sectional Surveys have been administered to collect quantitative and qualitative data. Therefore, survey questionnaires and semi-structured survey interviews have been deployed respectively. The quantitative research respondents have been selected based on the stratified random sampling

technique that seeks to assess the associations and disparities between groups and subgroups of the target population. Meanwhile, the interviewees have been selected based on purposive sampling. For data analysis, the structural equation modelling—partial least square statistical tool has been utilized to process the quantitative data (to treat data, test the hypotheses, and account for the validity and reliability of research instruments) through the utilization of Smart-PLS 3 software. In the meantime, Braun & Clarke's (2006) thematic analysis pattern has constituted the blueprint for this study's qualitative data processing and examination. Triangulation techniques have been inserted to account for the consistency of the findings from both methods.

8 Research Originality and Added Value:

In the context of this research, the far-reaching grasp of the ins and outs of the studied phenomena has provided the investigator with insightful illuminations regarding the critical areas of insufficiency, inconsistency, and the utter dearth of the research on this field of study. Therefore, the current paper's conceptual framework has been crafted based on the perceived gaps in the body of knowledge describing the interrelations between the various constructs and their presumed effects on HEI's achievements. Indeed, most academic research has failed to provide well-substantiated answers to the persisting questions of the nature of the correlations and contributions of organizational culture, leadership style, total quality management, and balanced scorecard to the performance of higher educational institutions. Although there have been extensive descriptions of the interconnections between some of these concepts and their impacts on the organizational outcome, most of these depictions have fallen short of providing adequate accounts due to their limited scopes and select confinement to individual variables to bring out the assumed influence on organizational accomplishments. On that account, this paper seeks to bridge the gap detected in most of the studies which examine different factors separately and disjointly most probably due to the intricacy of the subject and the complexity of combining these variables in one theoretically coherent frame of reference and a methodologically cohesive research paper. A challenge that this thesis claims to surmount successfully. Most academic works have incorporated one or two constructs and, most often, in a wholly distinct field of study than higher education.

The prevalent research has been conducted in the business field and has targeted enterprises and firms to account for their financial and non-financial performance from much customized perspectives. This failure to see the big picture is a significant gap that this dissertation endeavours to fill by integrating the four previously stated constructs in one all-embracing study. What is more, no other thesis has sought to investigate the correlations

between these factors in one solidly built mixed-method empirical framework. The fusion of the qualitative and quantitative methods is a detachment from the general preference of mainstream research to come up with merely qualitative analyses of these liaisons. This one method certainly leads to inconsistent and inconclusive findings that should be prudently approached and built upon in further research. Additionally, the originality of this paper lies in its depiction of the causal paradigms delineating the impacts of the dependent variables (organizational culture, leadership, style, and total quality management) on the dependent variable (organizational performance) as they portray and bear upon the Moroccan public universities' outcome. Another exclusivity of this dissertation is the integration of the mediating variables, job satisfaction, and organizational commitment to come up with a holding together description and analysis of the intermingled variables. This amalgamation of dependent, independent, and intervening variables aims at elucidating the direct and indirect correlations between the causal variables and the outcome variables. This dissertation is a systematic extension of international efforts to provide credible and valid academic research in the related disciplines. In the national context, this study fills the outright absence of research in this field of study. This paper can be deemed a pioneering initiation and a leading-edge inauguration of hitherto unexplored dimensions of higher education in Morocco.

Indeed, this paper tracks down complex phenomena that have been thoroughly investigated in the western contexts, whereas, to the researcher's best knowledge, they have never been considered in any comprehensive academic paper in Morocco. In all, this is a cutting edge thesis that raises a novel subject matter to break new ground in the scientific research and to tackle a sensitive issue that touches upon the higher education system and the significant antecedents contributing to its status quo in such a developing country as Morocco.

9 Research Structure

The integrality of the current dissertation has been architected based on a systematic scheme of chaptering. Therefore, the thesis structure consists of six underlying chapters: introduction, literature review, methodology, structural equation modeling and thematic analysis, data analysis and results, and discussions of results and conclusions.

The inceptive chapter introduces the subject while outlining research problems and objectives. It also provides an insight into the research design and methodology as it lays the ground for the study's preliminary conceptual model.

The ensuing chapter provides extensive descriptions of the cross-disciplinary literature underlying the key concepts, theoretical paradigms, and schools of thought aligned with the integrated research models. Additionally, it accounts for how these paradigms interrelate to form the overall theoretical framework.

The third chapter pinpoints the methodological frame of analysis regarding the cross-sectional mixed-method approach and lays bare the quantitative and qualitative procedures in this study.

The subsequent chapter investigates thoroughly the detailed line of action undertaken to execute the PLS-SEM and thematic analysis for the statistical cross-examination of the semi-structured questionnaires and interviews.

The fifth chapter is devoted to data analysis and results. Meanwhile, the concluding chapter offers rich discussions and conclusions of the research findings in light of the extant literature.

Chapter One: Review of the Literature

Introduction

The in-depth literature survey has led the investigator through detailed examinations of the wide-ranging materials revolving around the academic sphere of organizational performance assessment. This has entailed extensive browsing through cross-disciplinary fields of study to identify the most applicable models of measurement in higher education. Thus, four substantive research areas have been investigated and integrated to form an all-inclusive conceptual model. The initial line of inquiry considers the theory of leadership as it tracks down the evolution of managerial paradigms as well as the leaders' behaviours and practices. It synthesizes the most contemporary trends that investigate new perspectives related to leaders and subordinates' relationships. This section's theoretical frame of reference is formulated in line with Bass & Avolio's (1995) MLQ 5X. The second centre of interest concerns organizational theory. It provides a thorough description of the most prominent paradigms underlying organizational culture. It also develops a conceptual framework that establishes a link between specific types of institutional culture and performance based on Cameron & Quinn's (2006) CVF model. The third part of the review explores the theories, models, and implementations of the total quality management in HE. The theoretical framework has been conceptualized building on the financial, academic, and governance applications recommended by the national reforms and substantiated by the pertinent international body of literature. The ensuing research segment browses the extensive literature to uncover the traditions and applications of the balanced scorecard among other measurement models. It ponders over the BSC management system and its crucial role in weighing up the achievements and effectiveness of tertiary education. It is wrapped up with the display of this extensive matrix of quantification within the proposed BSC framework as suggest Kaplan & Norton's (1992). Ultimately, in the fifth section, the correlational analysis of this thesis delves into detailed explications of the interrelations between all the variables to investigate the assumed positive-negative impacts on organizational productivity and performance. The overall conceptual framework goes into the direct and indirect liaisons between the causal variables (independent variables) and the outcome variable (dependent variable). Therefore, the direct interconnections search into the rapports between organizational culture, leadership style, total quality management, balanced scorecard, and organizational performance. In contrast, the indirect account inspects the assumptions of mediating roles of job satisfaction and organizational commitment between the independent variables and the dependent variable. This thesis proposes a multiple-mediator

model analysis to test the hypothesized mediation. The Moroccan context has been brought to light to pave the way for the empirical inquisition of the public universities' performance.

1 Initiation and Descriptions of the Key Concepts:

1.1 Performance Evaluation in Moroccan Higher Education:

The policymakers and reformers of the Moroccan educational system have been cognizant of the strategic integration and formalization of the evaluation process at all levels of education. The patterns of evaluation insinuated in this paper are the estimation of the effectiveness of the overall system of higher education as well as the consolidation of the internal and external evaluations carried out at the level of the universities. By way of illustration, special bodies and agencies that inspect and report on the areas of strengths and weaknesses linked to the multifaceted aspects of the universities' accomplishments can conduct state auditing. Meanwhile, self-evaluation entails the establishment of internal systems of assessment and auditing of the pedagogical, administrative, and financial records of the universities for scheming adjustments and improvements. In this regard, the legislator has enacted a legion of laws that provide the legal frameworks for the systematization of these two types of evaluation. The law 01-00 and the National Charter of Education are the principal enactments that bear upon every factor related to education, including academic management, human capital structure and composition, quality optimization, financial and administrative governance, etc. The National Charter of Education (1999) comprises many articles, which touch upon the concept of evaluation as the chief upholder of the success of the reform. Article 157, for instance, insists upon a comprehensive valuation of the entire educational system. This evaluation is based mainly on the educational, financial, administrative, as well as self-assessment of each higher educational institution. In a similar vein, Article 77 of the statute 01-00 recommends financial, pedagogical, and administrative auditing of HEIs. According to this Article, universities should develop self-evaluation systems for the constant internal and external appraisal of their establishments, scientific research, and cultural manifestations and contributions. Similarly, Article 78 consolidates the previous recommendation of instituting the culture of self-assessment within Moroccan public universities. Additionally, the charter has emphasized the role of the creation of the evaluation agencies and bodies in fostering and instituting quality assurance and performance assessment within the Moroccan tertiary education. On that account, the Article 103 suggests the creation of the National Evaluation and Guidance Agency. The Article 79 (of the law 01-00) requests the foundation of a national evaluation body as well as an observatory for the adequacy of higher education to the Moroccan economic and professional environment (Dahir No. 1.00 .199 of 15 Safar 1421, May 19. 2000).

Regarding financial affairs, mainly the setting up and evaluation of a system of tax incentives, the Articles 83 and 84 recommend the provision of exceptional support to HEIs in the form of tax privileges to entice them into creating and developing high-quality education. Meanwhile, Article 85 solicits periodic auditing of the pedagogical, administrative, and financial management of the institutions benefiting from these tax exhortations.

Nonetheless, despite this arsenal of laws in favour of the incorporation and implementation of performance evaluation, the actual operationalization of these enactments remains very limited and confined to some occasional practices and patterns. In this context, Kaaouachi (2007) draws attention to the intermittent and irregular nature of the evaluation of the Moroccan higher education institutions. He maintains that the assessment of the academic institutions occurs very seldom, and it is occasionally undertaken in some well-reputed specialized superior institutes such as ENCGs, TSPs, and TSEs.

1.2 Concept of Organizational Performance Assessment:

The seminal study of performance has brought forth a generic variance in what concerns the provision of standard definition and conceptualization of this concept (Barney, 2001). Though the subject matter of performance assessment has been thoroughly researched in the literature, only scarce descriptions have been provided (Neely et al., 1998). Thus, intricacies related to the terminological and conceptual grounds of organizational performance emerged on all accounts (Ford & Schellenberg, 1982). In the meanwhile, there has been a general dissection of performance as the attainment of the pre-schemed goals with the allocated resources of firms. On that account, common grounds associated with the organizational accomplishment of the planned goals as well as the creation of value have been put forward throughout the relevant literature. Campbell (1990) offers a delineation of performance that describes it from content and structure outlooks. Thus, he defines it as ‘a virtual desert’ and that it is the outcome of organizational commitment to perform its goals in a good way. Daft (2000) relates organizational performance to the organizational capacity to obtain and bring about the projected objectives and missions. Building on these interpretations, it has become patent that performance indicators should encompass the goals and strategies of the organization. Accordingly, metrics of assessment have been linked to the identification and scheduling of goals and plans. In this vein, Hofer (1983) contends that each discipline and area of research should be weighed using a consistent metric due to the diversity of research questions across subject fields. Similarly, it was deemed that the implementation of multiple indicator tool to put a firm’s performance under scrutiny could yield far-reaching outcomes than a single

measurement instrument. In the meantime, it is widely acknowledged in the literature that its multi-dimensionality characterizes the concept of performance (Kaplan & Norton, 1992; Wettstein & Kueng, (2002). This multidimensional aspect of performance has been underscored by Cameron (1980), who affirms the contribution of plenty of disciplines to the development of sophisticated financial and non-financial measures. What is more, this multi-faceted embodiment has been brought to focus by Borman & Motowidlo (1993), who restricted contextual and task as two fundamental types of performance. In this respect, they associate task performance with the technical duties that require a certain level of expertise and competencies. Meanwhile, they correlate contextual performance to the psychological and sociological settings that bear upon organizational operations and measures. In this regard, Venkatramam & Rananjan (1986) suggest a three-dimensional pattern that comprises finance, operations, and stakeholders. This multilateral nature entails numerous complications in the application of multilayered measurement methods to gauge the various interrelated organizational modalities and features. The systematic quantification of performance is one of the most intricate and controversial processes owing to its integration of many-sided dimensions that appertain to multiple disciplines, namely finance, accounting, management, operations, marketing, etc. The intricacies are mostly coreferent with the adopted mechanisms of sizing performance and the extent of comprehensives of the executed methods. By definition, an exhaustive apparatus of evaluation should include financial and non-financial metrics to measure an entity or organism. Hansen & Wernerfelt (1989) identify the economic, behavioural, and sociological components as the significant antecedents affecting organizational performance success.

Traditional measurement approaches based on tangible financial assets have been quite outdated and unable to keep up with the continually evolving organizational environment (Jusoh, R. et al., 2006). Correspondingly, there has been a noticeable and ‘revolutionary’ shift in the performance measurement (Neely, 1999). Early financial metrics consisted of conventional systems of preparing budgets, profits, cost ratios, etc. Therefore, with the development of new approaches to estimate the various features of firms during the 1980s, traditional accounting indicators were no longer satisfactory for the conduct of comprehensive estimations of firms. The shift from competition-based to the customer and quality-based management has reoriented performance assessment priorities into more focus on how organizational environment and objectives are reflected. Furthermore, the evolvement of the functions of the departments, particularly accounting and HR services, have broadened the number and nature of the non-financial factors utilized to inspect firms’ achievement. In fact,

the heated debate relative to which type of measurement is the most efficient, be it financial/accounting metrics or non-financial/non-accounting metrics, has enticed many scholars and firms to explore and test more comprehensive models than the ones already existing. The preponderant trend in the literature is supportive of the adoption of holistic approaches that comprise financial and non-financial dimensions. This argument is in line with the overwhelming preference to avoid unidimensional measures that account for an entire organization from an exclusively one-sided measurement tool; thus, yielding inadequate and biased outcomes. Financial means fail to account for intangible elements, while non-financial clues cannot be represented in substantial value-added. This is believed to distort and misdirect strategic decisions and objectives. This also suggests the aggregation of both parameters to generate valid and multidimensional analyses of the performance projection of a firm. In this line, Hermalin & Weisbach (2003) have advocated a weighty view in favour of the adoption of an all-inclusive instrument approach of performance evaluation. They support the application of both monetary and non-monetary indicators as mixed tools to come up with an overall analysis of the firm's performance.

Conventionally, financial and accounting measures have been perceived to be the most used and reliable means of assessment as they provide accurate data that are susceptible to comparison (benchmarking) between different organizations operating in the same sector. Monetary components have been associated with the rate of profitability, the generated value of the firm (added value), revenue and liabilities, the estimate of productivity, etc. In the meantime, Otley (2002) argues that the financial statements provide outcomes in the form of auditable numerical indexes that assist executives in the formulation of central decisions. He further maintains that the mandatory reports that are disclosed at different intervals (quarterly and annually) provide information to the public, stakeholders, taxation authorities as well as senior executives about the cash flow, debt-equity and return on equity capital, and asset value. Otley singles out three features that constitute the core of financial planning: profitability, cash flow, and assets. While he pinpoints the significance of these financial statements to the management of the financial resources, he recognizes that they are far from being objective. This is mainly due to their reliance on historical and outdated records, which undermine the prospect of making reliable future investment decisions. Moreover, Abukasim et al., (1989) lay down four aspects of financial quantifications: net profit, sales growth, growth profit, and sales.

What is striking is the substantial number of organizations that conducts traditional financial auditing despite the noticeable breakthrough in non-financial instruments. Indeed, non-monetary metrics have rapidly gained as much importance as the economic indices,

especially with the increasing zooming on employee behaviour and customer contentment with the provided products and services. Non-financial indicators refer to descriptive parameters that comprise many variables such as management control system, customer satisfaction, and employees' satisfaction. In the same vein, it is argued that the most critical manifestations of non-financial measures are organizational commitment, job satisfaction, and staff turnover (Mayer & Schoorman, 1992). In all, organizational performance should be gauged using quantitative financial metrics as well as qualitative estimations to align monetary growth and profitability with the provision of quality service and product to satisfied stakeholders and employees in a suitable work environment.

1.3 Concept of Leadership Style:

Notwithstanding the substantial inquest of leadership, it has always been deemed a cryptic conceptualization. On that account, the consecutive trials to scrape together a plausible and comprehensive denotation of this concept have bumped against its ever-changing substance and constantly developing implications. Fundamentally, the primary functions of leadership, which are embodied in directing subordinates, setting goals, overcoming conflicts, communicating, and making the decision, have remained immutable despite the evolving theoretical grounds (Clark, K.E & Clark, 1990). In the meantime, it is worth mentioning that the efforts to capture the essence of leadership trace back to Plato's confinement of power to the few privileged individuals who were perceived to possess distinctive traits that legitimized their claim of leadership positions. This tight circle of the elite was worthy of commanding larger groups of followers as maintained Aristotle. Machiavelli's postulation further backed up this view that the restricted class of power holders comprises those who could organize authority and possess the knowledge to run the state. These standpoints aligned perfectly with the divine benediction granted to the chosen ones to reign as contended ST. Paul. Meanwhile, the major breakthrough in leadership was achieved during the 1990s with the increasing probing and identification of the so-called superior traits of leaders (Hodgetts, 1993). Accordingly, the notable shift in the perception of leadership from being an inborn gift to being acquirable skills had redefined the meaning of this construct. Therefore, the modern perspective of leadership was identified with a range of hitherto unexplored features, namely, goals accomplishment, managerial behaviour, process and influence, mobilization and direction of teams, etc. In the meantime, agreeing on one definition of leadership remains impossible and triggers stinging intricacies (House et al., 2004). The various controversies associated with leadership are embodied in the broad scopes and inherent criteria of this construct. Therefore, its depiction entails the incorporation of many analyses, particularly, psychological, sociological, managerial, business, and religious

accounts. This insinuates that the abundant descriptions of leadership reflect the scholars' areas of concern from which they investigate it, such as the behavioural standpoint, the path-goal theory, contingent or situational leadership, etc. In this regard, a prominent account of this construct was provided by Stogdill, who described it as "The process (act) of influencing the activities of an organized group in its efforts towards goal setting and goal achievement." (Stogdill, 1950, p.3). This delineation falls within the process of leadership, as was theorized by Tago (1982). In this pattern, leaders utilize all their expertise and competencies to entice the process towards the achievement of the preplanned objectives. Northouse (2007) highlights the notion of leadership as a process that contributes to leader-follower mutual influence and interaction. Correspondingly, leadership is no longer reduced into one person who is in charge of everything. Instead, it is a process of interaction through which leaders exert influence on groups of individuals to accomplish the preset goals. Influencing others to achieve the schemed project is an art that leaders should master (Cohen, 1990). In another account, Hemphill & Coons (1957) brought forth a depiction of leadership as "The behavior of an individual when he is directing activities of a group toward a shared goal." (p.7). This definition seeks to decorticate the managerial behaviours and practices that leaders perform in order to handle employees and teams. Meanwhile, providing guidelines and motivating subordinates to get tasks done are not the most recommended behaviours (Gill, 1998). Simonton (1994) describes a leader as "a group member whose influence on group attitudes, performance, or decision making greatly exceeds that of the average member of the group." (p: 411). The notion of influential leaders who affect different members at all levels of organizational practices and achievements has been fostered in this account. Thus, organizational behaviour has deemed leadership an integral component that determines individuals and teams' interactions with the organization in which they belong and operate. In this respect, a leader has been required to possess Stogdill's (1948) inventory of acceptable behaviours. These include capacity, participation, achievement, status, situation and responsibility. Similarly, Dubrin (2004) refers to leadership as a mingle of behaviour and attitude that generate particular patterns of followers' management. At the organizational setting, it was considered that leaders establish and maintain culture empowerment through training and guiding followers (Spencer, 1994). This dissertation adopts Avolio & Bass's (2004), multi-factor leadership model. This paradigm examines the leadership construct from three behavioural aspects, namely transformational, transactional, and laissez-faire typologies. Thus, the Full-Range model has been implemented to capture the multidimensional essence of leadership.

1.4 Concept of Organizational Culture:

Throughout the academic research seeking to examine university management and performance, the concept of organizational culture has been perceived as a leading-edge factor of change and influence affecting the various aspects of tertiary education. This increasing prominence finds justification in the assumption that culture largely ensures the identity of each organization. On that account, there has been a massive consent that the inherent culture is laid down by the shared set of values, norms, beliefs, and attitudes among the personnel. Accordingly, Mas'ud (2004) emphasizes that organizational culture consists of a range of values, beliefs, and meaning that constitute the primary references for all the members of an organization to behave in conformity with its culture. These components combine together to form distinctive characteristics and unique environment that discriminate one organization from another. They also determine work processes, employees' engagement and satisfaction, and the quality of the achieved outcomes. However, a maze of multidisciplinary and ideological complexities makes it quite difficult to provide one comprehensive account of the organizational culture. Indeed, although the concept of culture has long been investigated in the social sciences, many eminent academics have recognized the relatively recent use and study of the term organizational culture (Hofstede et al., 1990). Correspondingly, it has been argued that the construct of culture has only recently been utilized in the field of organizational theory as the rising impact of sociology and anthropology have been noticed (Werner, 1940). Meanwhile, an extensive review of the multiple endeavors that account for organizational culture ascertains the view that the development of the construct was quite contentious and polemic throughout the comparatively short history of organizational theory (Reichers & Scheinder, 1990). In the same line, Howard (1998) reveals the scholars' striking failure to come up with a unified definition of the organizational culture. Similarly, Jelinek et al., (1983) hold that it has been open to criticism as it bears plenty of interpretations. This conceptual weakness and inability to generate generally agreed-upon features of the concept is mainly due to its multidimensional nature, which makes it quite difficult for any single definition of a social science constructs to do justice to its intricacy. The roots of this complexity date back to the debate over the emergence of the concept. Therefore, while some scholars have attributed its advent to Hawthorne studies (Mayo, 1933; Roethlisberger & Dickson, 1939), others have credited Pettigrew's pioneer contribution "On Studying Organizational Cultures" in *Administrative Science Quarterly* in 1979, for being the first systematic deployment of the term organizational culture (Hofstede et al., 1990). It was argued that the author correlated the birth of an organization with the existence and creation of culture. Furthermore, His anthropological initiation of some primary conceptualizations and processes, such as, "symbolism and rituals"

had paved the way for subsequent research on new aspects of organizational performance, strategies, and commitment. In another account, Barely et al., (1988) noted that the roots of corporate culture could be tracked down to Schein (1971) and Van Maanen (1976), who pinpointed the “local interpretive structures and ritualized practice” to fathom the dynamics of the organizations. Hatch (1993) and Dension (1996) concord with this view and confirm that the parameters of culture are frequently mixed up. Besides, Smircich (1983) underscores the elusiveness of organizational culture as well as the lack of consensus on an overwhelming description of its intricate anthropological sources. What is more, several disciplines have been inspecting the concept, each from its specialization and area of research. Therefore, they have provided a variety of depictions to frame the same concept as displayed in the following table.

Thus, Pettigrew (1979) introduced the concept from an anthropological angle; early theorists like Marx, Durkheim, and Weber examined it from a sociological standpoint; Schein (1985) undertook a psychological approach to describe it; Hatch (1993) explored it from a symbolic outlook; Peters & Waterman (1982) delved into the shared values, and Lorsch (1985) probed into its behavioural norms. In the same vein, different scholars ascribed various meanings and used numerous terms to refer to the construct. Therefore, some have used ‘organizational climate’ (Hellriegel & Stocum, 1974; Litwin & Stringer, 1968); others suggest “workplace environment” or “corporate culture” (Deal and Kennedy, 1982); and ‘organizational behavior’ (Schein, 1990). Consequently, the term holds specific connotations to each researcher (Sathe 1983; and Ogbonna & Wilkinson 1990). Ott (1989) provides more meaning to the scattered descriptions and confirm the steady and unchangeable functions of organizational culture. In this respect, the most accepted definitions entail some common features that mitigate the sharp discrepancies across the literature.

Hence, it has been agreed that organizational culture denotes the system of shared meaning that differentiate one organization from another (see the table 1 above). Robbins (2001) link organizational culture predetermined values and traditions to the change of the members’ behaviors. They associate the conforming behaviors with the extent to which employees are formed to implement the model of conduct within the organization. Above all, Schein’s (2009) depiction of organizational culture has been a referential account to most scholars and practitioners. He characterizes it as a pattern of basic assumptions that are corroborated and established by the organization. These assumptions enable the undertaking of a number of actions and decisions related to the resolution of problems and the initiation of programs for the training and development of HR to deal with the workplace environment. However, the major breakthrough in the organization theory took place during the eighties. It thrived with the dissemination of a constellation of articles ranging from organizational

sociologists (Durkheim 1982), through Meta – theoretical assumption (Smircich, 1983), anthropological perspectives (Allaire & Firsirotu, 1984), social psychologists (Barley, 1983; Martin & Powers, 1983; Van Maanen & Barley, 1984; Schein1985), and the historical development (Martin et al., 2004) and Burrell and Morgan’ (1979) matrix.

Table 1: Definitions of Organizational Culture.

Scholars	Definitions of culture in organizational theory
Kroeber & Kluckhohn (1952,p.181)	<i>“Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other as conditioning elements of further action.”</i>
Pettigrew (1979,p.574)	<i>“Culture is the system of such publicly and collectively accepted meanings operating for a given group at a given time. This system of terms, forms, categories, and images interprets a people’s own situation to themselves.”</i>
Smircich (1983,p.344)	<i>“Social or normative glue that holds an organization together.”</i>
VanMaanen & Barley (1983,p.8)	<i>“...is symbolic, ideational, carried by people, and represented by the norms and rules they can be shown to adhere to and by which to judge others.”</i>
Schein (2010,p.18)	<i>“A pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.”</i>
Hofstede (2011,p.3)	<i>“The collective programming of the mind which distinguishes the members of one group or category of people from another.</i>

This thesis draws from the rich literature to build the conceptual and empirical frameworks based on Cameron and Quinn’s (1999) identification of organizational culture as being *“reflected by what is valued, the dominant leadership styles, the language and symbols, the procedures and routines, and the definitions of success that make an organization unique.”* (p.17). Thus, the CVF model has provided the conceptual ground for the investigation of culture within public universities. This taxonomy comprises four quadrants (clan, adhocracy, market, hierarchy) and conceives organizational culture as an integral element of organizational performance (Cameron & Quinn, 2006).

1.5 Concept of Total Quality Management:

Since the early implementations of total quality management in the world of management, it made way for new blood in organizational practices. Meanwhile, prior applications of TQM have been effectuated in the manufacturing sector. The efficacious outcomes in this field paved the way for the massive proliferation of TQM into the service sector (Gustafsson et al., 2003). In the meantime, there is an overwhelming consensus in the literature that the quality management (QM) conceptualizations are attributed to the preliminary indoctrinations of Deming, Juran, Crosby, and Ishikawa. These eminent scholars brought forth the foundations of TQM that had been gradually adopted and established in most services and industries. The evolution of total quality management was through the gradual maturation of four underlying phases: (1) quality inspection, (2) quality control, (3) quality assurance, and (5) quality management (QM). In the meantime, numerous labels have been utilized to refer to the various quality management systems such as quality function deployment (QFD) and continuous quality improvement (CQI) that have been carried through in different domains. Most of these systems have failed to provide exhaustive schemes to handle quality complications. On the other hand, TQM has later on been substantiated as one of the most effective approaches and has evolved into international standards such as the ISO 9000 (Talib & Rahman 2010). TQM has been a catalyst topic in operations management since its substitution of total quality control that was initiated by Frigenbaum (1961). TQC's main shortcoming has been detected in its exclusion of some important principals existing in TQM such as, empowering subordinates and managing teamwork. TQM has stood out from the multitude of management systems by its capacity to engage top executives and associates in the various operations and schemes that aim at satisfying customers' expectations. However, the analysis and revisit of literature reveal differing inconsistencies and variations in the elucidations of TQM concept. This finds justification in the manifold standpoints from which it has been defined. Accordingly, it is very difficult to reach a consensus on a unified description of TQM due to its multiple perspective nature (Idris & Zairi, 2006). Besides, Watson & Korukonda (1995) confirm the diverse meanings of QM due to the extensive accounts in academic research. Garvin (1988) ascertains that the concept of quality is not new; rather it has been with us 'for millennia'. This suggests that the new outgrowths of quality have allowed the emergence of formal management functions. Therefore, varieties of definitions have attempted to throw up light on the substance of quality. To this end, various scholars interpret it in terms of achieving excellence or distinctive advantage over competitors. Others associate it with the well-organized process in an organization that leads to high value outcomes. Quality requires the conformance to a set of customer requirements that, if met, result in a product or service that is fit for its intended use.

Customer's contentment with the provided product or service has been the central issue of firms. This accounts for Crosby's (1984) early affirmation that quality should adhere to measurable standards and conform requirements. The construct of quality has also been identified with the eradication or diminishing of failure (Juran, 1988). Failure might signify the inability to upgrade services or products' functions to meet the expectations of customers.

The voluminous research that has been carried out in all fields has vindicated the tremendous role of TQM as a management philosophy that seeks to maximize the performance of organizations. In this line, Zhang (2001) hold that TQM has been applied in firms as a managerial philosophy to rectify and meliorate their efficiency and accomplish optimum quality performance. In a similar vein, total quality management has been depicted as the system of procedures and the set of actions and activities that managers carry through to empower members, increase return, satisfy customers, and minimize expenses (Juran, 1995). Kaynak (2003) sets forth an account of TQM that depicts it as a holistic managerial approach for the achievement of an ongoing development scheme of the whole organization through the systematic deployment of the required resources to provide better after-sales services. What is more, Mosaddegh Rad (2006) went farther to the point of considering TQM as the organizational culture that prioritizes progressive development and customer satisfaction. No matter which elucidation does reflect the genuine meaning and applications of TQM, generating a unified and integrated delineation of this construct remains quite laborious. All the while, many scholars have identified important points of convergence of TQM descriptions. Thus, it was argued that customers' behaviours could be monitored by the generation of some attitudes regarding the improvement of the quality of the technical side and material well-fare (Lazur et al., 2013). Similarly, Dahlgaard et al., (1999) underscore a significant point of intersection between various accounts when they referred to the amelioration of quality as "doing things properly". Proper handling of organizational processes and operations is a common notion that has been emphasized by different researchers.

The vast literature on TQM singles out many integral practices that managers perform to put into effect and optimize TQM strategies in organizations. Thus, Top executives have the upper hand in planning actions and taking decisions related to activating control systems for the assessment and redress of performance. In this respect, leadership should undertake three underlying practices: quality design, quality control, and quality upgrade (Juran, 1992). On that account, managers should formulate quality programmes that would be followed by departments and subordinates. Subsequent supervisory actions should be taken to oversee the quality of the process. Lastly, areas of deficiency should receive remedial or adjusting measures to improve quality. These operational activities should align with the leader's vision of

excellence. The central duty of managers is the elaboration of clear goals and strategies for the appropriate carrying out of the quality management system. They should optimize the participative culture by implementing policies that entice individual members to partake in the decision-making process. The adequate execution of TQM requires the collective contribution of leaders, subordinates, and customers to achieve excellence.

With reference to quality in tertiary education, its significance stems from the capacity of universities to provide the job market with qualified professionals who can contribute to the economy of the country (Van Vught & Westerheijden, 1994). Indeed, TQM incorporation in higher education has become imperative to meet the ever-changing requirements of the rapidly growing market. In this respect, high calibre profiles of graduates have been incredibly sought for by all sectors and industries. This puts more pressure on universities to develop innovative educational programmes that meet particular quality standards. More importantly, the consistency of higher degrees with market demands is the core issue of quality assurance. Quality management in higher education is synonymous of the ongoing search for new approaches to upgrade teaching and learning methods, enhance curricula content, provide satisfactory services to students, and find ways to assess QM strategy. Many organizations, especially those operating in the sector of education suffer from acute issues related to the quality of services and educational programmes. In many instances, students complain from deteriorating conditions of studying and the lack of equivalence between their qualifications and the job market orientation, which result in high rates of unemployment. The answer to the above challenges lies in the implementation of total quality management to boost excellence. Meanwhile, for the methodic application of TQM, various sources should be allocated namely financial funds, human resources, and committed leadership.

This study draws from the recommendations of the national reforms that establish quality management within Moroccan higher education as a priority to leverage the quality of education based on financial, academic and governance applications of autonomy. Additionally, the conceptual framework of TQM has been designed and built with the focus and contribution of the abundant findings of the relevant international literature. This paper probes into TQM implementation to inspect its effects on the performance of Moroccan universities.

1.6 Concept of Job Satisfaction:

For many years, job satisfaction has been gaining ground throughout the extensive body of the literature relative to organizational theory (Lund, 2003). Similarly, Kim et al., (2009) maintain precisely the same account and state that researchers have embarked on probing into job satisfaction as early as the 1930s. They have been inspecting this construct as an integral part of the organizational theory for several decades. This parameter has gained fame in organizational psychology and behaviour owing to its impact on organizational progress and performance. This premature concern with the administrative aspects contributing to the contentment of the employees with their workplace has displayed the growing awareness of the role that working conditions and environment can play in boosting productivity, commitment, and turnover (Eslami & Ghrakhari, 2012). In the meantime, there have been diverse descriptions to account for job satisfaction. Mueller & Price (1990), who note that this construct depicts the accumulated beliefs and perceptions that employees form and expect their organization to meet, have provided a straightforward delineation. Besides, Locke (1976) provides a thorough depiction of job satisfaction as a positive mental state (feeling), which is derived from the value that employees associate their organization with and from the expectations they have of their professions and genuine working environment. This satisfaction reflects subjectively on the employees' attitude towards their organization. In the same vein, Grant et al., (2007) associate job satisfaction with the employees' mental comfort and social welfare and happiness in their jobs. What is more, Weis et al., (1967) establish a correlation between job satisfaction and individual success (which is) attributed to the employees' faculty to keep excellent bonds between them and the environment in which they operate. This success is further linked to the overwhelming feelings that haunt individuals and guide their work tendencies and achievements. This has largely been portrayed in Spector's straightforward definition of job satisfaction as "the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs" (Spector, 1997.p, 2). In most accounts, job satisfaction was identified with the affective or emotional state of employees towards their job environment, which reflect in their attitude. Correspondingly, Kreinter & Kinicki (2007) identify job satisfaction with the emotional feedback to differing work circumstances. Job satisfaction was aligned with the kind of feelings and attitude that individual members have towards the work setting. Handoko (2001) holds that job satisfaction is estimated by how much pleasant or unpleasant employees feel towards their job conditions. In most of these accounts, subordinates' behaviours are determined by their feelings of comfort and commitment or not.

Meanwhile, other scholars draw attention to a myriad of dimensions related to this concept. Therefore, various descriptions of job satisfaction bring forth different aspects that affect employees. For instance, Mowday et al., (1982) highlight the “employee’s self-recognition” within the organization. Freeman (1978) bring out factors such as pay, pay equity, and market determinants as the most significant indicators of satisfaction. Dipboye & Howell (1994) underscore the employee’s “like and dislike” of the job. Tuch & Martin (1991) inspect the disparities related to racial specificities, gender differences, and social structures; Tsai et al., (2007) emphasize the psychological, physical and environmental conditions that bear upon personnel; Ryan & Deci (2000) stress intrinsic and extrinsic components conducive to motivation. In the meantime, the whole of the job satisfaction’s accounts entails intrinsic and extrinsic components that have a weighty impact on the employees’ feelings and attitude towards their workplace. These elements comprise management, payroll (salary), fringe benefits, recognition, and communication (Pham, 2017). Furthermore, Worrell (2004) provides three factors of job satisfaction: demographic indicators (gender, age, and race); intrinsic indicators (accomplishments, progress, recognition, etc.). Extrinsic indicators (management policy, connection with leadership, income, and relationship with colleagues, etc.). What is more, other criteria determine the level of satisfaction and comfort of the employees with their work surroundings. These include benefits, supervision, and organizational practices (Misner et al., 1996). Concerning tertiary education, both intrinsic and extrinsic incentives and incitement are highly supported (Pauline, 2013). Altogether, these descriptions deal with varied dimensions affecting job satisfaction; they do intersect at the notion that satisfied employees would yield higher productivity and exhibit more engagement than dissatisfied members display. Moreover, while some of these accounts pinpoint satisfaction as a concept that is directly related to the job itself, the rest of these descriptions incorporate factors that contribute to the shaping of the employees’ thought and stance regarding their organization.

At the national setting, the study and investigation of job satisfaction in the Moroccan public education is quite a rarity (El Mossati et al., 2016). The Moroccan scholars El Mossati, Oudda, Ahami, and El Midaoui, have perceived the considerable scarcity of the research on the relationship between satisfaction at work and the determinants of the satisfaction of employees. Therefore, they have surveyed the impact of many variables, namely psychological empowerment, gender, seniority, and age on the contentment of full-time university teachers. They have made use of the “National Survey of Post Secondary Faculty” (NSOPF) as a research instrument to quantify job satisfaction. They provided three hypotheses that postulate a significant correlation between job satisfaction, psychological empowerment, age, gender, rank, and seniority. Data have been processed and analyzed using Excel and SPSS 17.0. The

outcomes of the study display favourable connection between job satisfaction and psychological empowerment and seniority at work. Meanwhile, the findings prove that males are more content and comfortable in their jobs than females. The ultimate objective of this study is to dig into the Moroccan university environment and determine the causes of satisfaction and dissatisfaction among employees. In this thesis, job satisfaction is a mediator/intervening variable that explains the causal correlation between independent and dependent variables.

1.7 Concept of Organizational Commitment:

The literature on organizational commitment is replete with descriptions and interpretations that highlight the necessity to ensure the steadiness and immutability of employees' devotion in the workplace (Eisenberger et al., 1990). The concept has been the subject matter of multidisciplinary research. Accordingly, it has been inspected from Psychological standpoint (Jaros et al., 1993); affective or emotional study (Mcschane & Glinow, 2010); moral aspirations and corporal well-being (Wiener, 1982). The significance of organizational commitment lies in its assurance of performance development in both for-profit and non-profit organization. Hence, Organizational commitment has become an indispensable prerequisite to the progress and success of any organization. Indeed, having committed human resources is not only a value-added but also imperative to the organization's competitiveness and sustainability in the marketplace. For no institution can maintain and boost its market share (the percentage of goods and services controlled by an organization in the market) in default of active personnel who do their utmost to achieve its goals and mission. Committed members contribute to the accomplishment of the company's goals and mission. Thus, commitment is reflected in how zealous and enthusiastic one can be while achieving organizational goals (Myer & Alen, 1991). For this reason, most organizations strive to create suitable conditions and appealing environments to entice their members to display affective, continuous, and normative commitments. These three levels of the staff identification with their organization determine the extent of the emotional involvement in their workplace (affective); the employees' cognizance of the benefits and losses resulted from quitting the job (continuous); and the ethical feeling of responsibility (normative) to maintain one's position in an organization (Meyer & Allen, 1984). This three-dimensional paradigm has dominated research on organizational commitment (Cohen, 2007). Meanwhile, a great few scholars have embarked on providing more descriptions of these three dimensions of commitment. Therefore, some researchers tackle this concept from the affective perspective that helps to establish a strong affiliation of the employees with their workplace (Mathew & Zajac, 1990; Naqvi et al., 2011). What is more, other scholars highlight the members' feelings towards their institutions. For

instance, Buchanan (1974) conceptualizes commitment concerning the emotional attachment between the objectives and values of the organization and the individual's role to achieve these goals and values, and the affective connection with the organization as a whole. This is in line with Porter et al., (1976), who describe commitment as the relative strength of an individual's identification and involvement in a particular organization. Jaros et al., (1993) associate affective commitment with the employees' psychological affinity with the organization. Furthermore, Mcshane & Glinow (2010) highlight employees' emotional attachment to the organization as the primary affective factor that helps them identify with and engage in their workplace. Building on these descriptions, this paper conceptualizes affective commitment as the emotional drivers that compel employees to attach themselves to the organization, adhere to its values, and achieve its mission and goals. Having stated that, it is patent that the degree of commitment varies from one individual to another in the same way that relationships with management, co-workers, customers, and stakeholders differ depending on how individual members perceive themselves in a given job environment. While the level of the immersion in an organization is contingent upon many factors, namely position, income, satisfaction, and networks, it reflects on the second constituent of commitment, which is the decision of the employee to continue working for an organization. This long-run engagement entails a lifelong investment in the workplace so that quitting the job becomes a disadvantageous decision regarding the privileges that employees accumulate throughout their careers. The third type is a normative commitment, which refers to the ethical and moral considerations that prevent employees from leaving a job due to the compulsive sense of responsibility or duty that haunt them (Cohen, 2007). Overall, Weibo et al., (2010) consider affective, continuous, and normative dimensions as elements of organizational commitment rather than types or categories of commitment. This denotes that the members of an organization can feel and go through these psychological components at different intervals and with varying degrees of involvement. It is worth mentioning that the construct of organizational commitment has also been approached from attitudinal and behavioural perspectives. The attitudinal approach identifies the employees' values and objectives with the values and mission of the organization, while the behavioural approach examines the employees' continuation in the organization (Meyer & Allen, 1991).

Section One: Leadership Style

Introduction

The current overview of leadership theory details the principal schools of thought. It traces back the evolution of leadership paradigms since the first characterization of personal attributes of individual leaders (trait theory) through the observation and categorization of leaders' behaviors (behavior theory) to the inclusion of the contextual and situational factors shaping leadership (contingency theory). It concludes with the most contemporary theories that investigate new dimensions associated with leaders' and subordinates' relationship, leadership and organizational culture, and organizational values (new leadership theories). This section adopts Bass's (1985) Full Range Leadership. The thorough examination of the literature leads the researcher across three primary underpinnings that frame this model: transformational, transactional, laissez-faire leadership. The significance of this section of the dissertation lies in its investigation and analysis of Moroccan leadership and culture from well-grounded research. The GLOBE study probes the national leadership and culture under the 'societal cluster' of the Middle East. The findings of this international study that surveys 61 countries place Morocco among the most hierarchical patterns of leadership, it further characterizes Moroccan leadership as being autocratic, procedural, collectivistic, masculine, normative, and restraint. These results have immediate implications for organizations in the kingdom. Furthermore, GLOBE has a futuristic projection of the effective leadership profile. In this respect, the outcomes show that Moroccans perceive an efficient pattern of leadership as being Participative and Team Oriented. They also regard charismatic and Humane-Oriented as positive attributes that contribute to the development of an outstanding portrait of leadership. On the downside, the findings categorize Autonomous and Self-Protective as serious impediments to effective leadership. In terms of culture, the results demonstrate that Morocco possesses low Future Orientation and Institutional Collectivism, whereas it scores high on Power Distance and In-group Collectivism. Other societal practices are ranked in a medium position, namely Humane Orientation and Assertiveness. It scores low on Performance Orientation, Uncertainty Avoidance, and Future Orientation. This research paper builds on the insight provided by the GLOBE study (House et al., 2004) and Hofstede's model to form a clear picture of the leadership and culture variables underlying organizational settings. The conceptual framework underlying this section is designed based on Bass & Avolio's (1995) MLQ X 5 model. It proposes four major hypotheses based on the impact that transformational, transactional, laissez-faire and effectiveness practices may have on leadership style. Accordingly, the transformational and effectiveness are assumed to have positive effects, whereas transactional and laissez-faire are conceived to have negative impacts on the perceived leadership style, and therefore, employees' performance.

1 Major Schools of Leadership :

1.1 Traits Theory:

The early initiative to account for leadership in a systematic fashion took place at the very outset of the 20th century with the emergence of the trait theories. The pioneer endeavour to describe leaders' characteristics started with "great man" theories, which highlighted the exclusive role of the inherent attributes and personality features in the distinction of some prominent military, social, and political leaders from ordinary people or followers. Therefore, the trait theory was an outgrowth of the 'great man' theories, which confined leadership to the upper-class individuals who were born leaders (Kirkpatrick & Lock, 1991). Similarly, Bass (1990) stated that the individuals blessed with these genealogical leaders' characteristics were meant to lead the masses.

The central studies on the trait paradigm have been taking place during the period extending from the 1930s to the 1950s. This stretch of time has witnessed the publication of the most influential articles and studies focusing on the inherited individual attributes that enable very privileged people to become leaders. The natural and hereditary predispositions make the difference between leaders and non-leaders. This paradigm gives credit to three prominent intrinsic factors in the shaping of leaders. These are personality aspects, cognitive capacities, and interpersonal features. It also argues that the leader's effectiveness is dependent on the characteristics of the personality, hence the focus of many scholars on studying the personality traits and fitting them to the typical features of leaders.

The development of this approach has systematized research in this hitherto unexplored field, yet, it limits its observations and analysis to the very distinctive features between "great" leaders and their followers (Bass, 1990). Moreover, critical questioning of the core assumption of this paradigm prompts Stogdill (1948) to disclaim the existence of any universal traits characterizing leaders without others; therefore, he undertakes a major remodelling of the theoretical paradigm underlying leadership research. Later on, Stogdill (1974) renounces this model as the basis for exploring leadership as it fails to come up with distinct traits that can distinguish leaders from non-leaders. He directly refutes the character claims of this theory after that he has reexamined some 163 studies carried out throughout 21 years of research. Nonetheless, personality type and individual factors keep on shaping effective leadership as it is argued that a leader in a given situation may not be a leader in different circumstances. In other words, some individuals may possess the required characteristics of leaders but not the attributes that enable them to foster and consolidate their leadership over an extended period as contingencies challenge them. Indeed, although Stogdill's (1948, 1974) outstanding surveys

pave the way for the association between behavioural and situational factors and leadership, they maintain the important role of personality attributes in the establishment of effective leadership.

Another significant trend in the trait theory is the expansion of the related research into the 'social intelligence' features that enable leaders to figure out their behaviours and thought as well as the feelings and mindset of their followers (Marlowe, 1986). In this line of research, other scholars such as Zaccaro, Kemp & Bader (2004) foster the notions of cognitive capabilities and emotional intelligence stability as being indispensable for leadership.

Meanwhile, the downsides of this paradigm are manifested in its inadequate account of individuals who acquire the attributes of the leaders without actually being in leadership positions. In the same vein, traits theories take into consideration neither the heterogeneity of subordinates, nor the different circumstances facing leadership (Hollander & Offermann, 1990). What is more, the very different and inconsistent taxonomies of leaders' traits have resulted in biased questionnaire evaluations and interpretations. Ultimately, it falls short of explaining the impact of leadership characteristics on leadership behaviours.

This theory has almost reached the phase of decay due to its questionable assumptions and the development of other research, which brings into focus leaders' behaviours rather than delving into who the leader was (Sashkin & Burke, 1990). Subsequently, this theory has regained its popularity and credibility when McCall & Lombardo (1983) have restored the waning fame of this paradigm by singling out the four top traits that make leaders very successful. These attributes are not succumbing to pressure, recognizing and learning from errors, persuading without coercion, and being versatile and knowledgeable. In this regard, it is worth mentioning that the current stream of research on this approach has broadened its scope of inquiry to cover other areas of analysis. Therefore, the re-conceptualization of the concept of leadership from being restricted to a few individuals with higher-than-average endowments to a concept that is susceptible to relational and social factors has shaped contemporary research.

1.2 Behavior Theory:

After the inadequate outcomes of traits paradigm due to its limited scope of research and analysis of personality characteristics, experts and researchers embarked on exploring new aspects that would provide a thorough description of leadership effectiveness. Therefore, considerable amounts of research studying the preferred behavioural styles among leaders were being conducted from the late 1940s to the mid-1960s. The objective was to investigate the behaviours that could boost the followers' effectiveness. That noticeable shift from studying

the characteristics of leaders to the observation and investigation of leaders' behaviours opened up limitless horizons to the development of leadership. Deeply-rooted in behaviourism, this paradigm's underlying assumption was a far cry from the conventional view which regarded leadership as an innate and hereditary gift that only very few individuals were granted. Indeed, unlike the trait theory, which emphasizes individual attributes to determine leaders, the behavioural approach highlighted leaders' "actions" and what they could "do" to account for effective leadership behaviors (Krumm, 2001). It looked at leaders' actions towards their subordinates in a variety of settings. This new notion of leadership under the behavioural approach surpassed the traditional concept of trait theories, which postulated that leaders were born. It contradicted with that viewpoint and posited that leaders were rather made.

According to this paradigm, intellectual and inherent qualities do not contribute to the making of leaders, but rather training and observation are the generating factors of effective leaders. It further argues that leadership behaviours can be acquired with appropriate training. Therefore, people do not need to be endowed with a set of distinctive biological traits that would distinguish them as leaders. Thus, for the duration of this period of leadership inquisition, the recognition of leaders from non-leaders has been grounded on particular observable behaviours. What is more, scholars have agreed on the role of various behaviours in different situations in determining leadership effectiveness. Simply stated, one can learn how to act as a leader in varied conditions and circumstances. Paradigms of the behavioural account of leadership are founded upon systematic categorizations of administration and related behaviours. In all, the transition from the trait theory to the behaviour theory is a huge step forward in the exploration of leadership theory.

The behavioural approach revolves around two principal axes of research: task-focused behaviours and relationship-focused behaviours (Farris, 1988). The Task-focused approach places the concept of leadership as a vital catalyst to job achievement and goal realization through the implementation of a system of reward. This method aims at structuring motivation and generating the desired behaviours from the followers. Furthermore, it entails assigning well-defined tasks, directing and supervising performance, and setting short-run schedules to get specific projects or to get the job done (Yukl, O'Donnel, & Taber, 2009). This type of behaviour makes use of one-way or downward communication to give directions of what should be fulfilled and who should execute it. The first behaviour highlights the human factor or people, while the second emphasizes the task or goal-fulfilment.

The relations-focused approach takes into account the relational and situational factors that contribute to the well-being of the followers. Leaders strive to make their followers feel at ease and contented. It is clear that it places much emphasis on interpersonal relationships.

Leaders make every effort to create a motivating and satisfactory culture in which close ties are developed. Unlike the task-oriented model, two-way communication takes place between leaders and subordinates in the relationship-oriented approach (Northouse, 2010). The smooth flow of information helps to create a democratic climate within organizations and efficiently implement directions as ambiguity and misunderstanding of the message are avoided. Besides, it places a high premium on work autonomy and recognition of effective performance, which is reflected in employees' satisfaction.

Two major studies have reshaped the research on leaders' behaviours. These surveys are attributed to the Ohio State University (Stogdill & Coons, 1957), and the University of Michigan (Katz, Maccoby, Gurin, & Floor, 1951). The first study examines two forms of behaviour. The consideration type of leadership refers to people-oriented leaders who pay careful attention to building bridges of trust and confidence with their followers. The second form is the initiating structure type or task-focused leaders whose primary concern is to induce the followers to perform tasks and meet particular performance standards. Indeed, intensive research has been carried out at the Ohio State University to uncover the very fundamental aspects of this approach. Stogdill's (1948) surveys provide the groundwork for these leading studies. In the meanwhile, academics at the University of Michigan have been engaged in extensive research to reveal how operational leaders can be within small groups. These studies are the hallmarks that frame the behavioural line of inquiry. Therefore, a depiction of each study would help to straighten out the behaviour theory of leadership.

1.2.1 The Ohio State Studies:

The Ohio State academics based their fieldwork investigation on subordinates' completion of questionnaires. Employees were required to rate a full range of behaviors and actions undertaken by their leaders. The group of researchers developed the Leader Behavior Description Questionnaire (Hemphill & Coons, 1957). The framework was built upon ten major headings: initiation, organization, fraternization, representation, integration, domination, communication up, communication down, production emphasis, and recognition (Fleishman, 1973). The LBDQ addressed some 150 questions on hundreds of followers operating in wide-ranging fields and scopes of knowledge. Among the assessed items, eight leadership features were quantified: communication, organization, membership, domination, leadership quality, production, initiative, and goal direction (Halpin & Winer, 1957). The survey concluded that leaders shared some common behaviors. What is more, the findings linked consideration to employees' satisfaction, whereas the initiating structure had a direct correlation with group

performance (Bryman, 1996). Stogdill (1963) developed a subsequent short version of this questionnaire called LBDQ-XII. This new version dominated the research on leadership.

1.2.1.1 Initiating Structure:

This type of behaviour refers to task-oriented leaders who put a high premium on systematic work, achieved schedules, assigned tasks, and structured labour. This factor links the positive actions of leaders to their structuring of relationships with their subordinates, the assignment of particular means of communication, and procedures to achieve the job (Halpin & Winer, 1957). Bryman (1992) refers to the initiating structure as the extent to which leaders are capable of organizing and structuring the work setting, distribute tasks and responsibilities, and ensure the execution of the planned work.

1.2.1.2 Consideration:

This type of behaviour highlights the social and relational aspects that direct leaders and followers, such as camaraderie, confidence, and mutual respect. According to Halpin & Winer (1957), the consideration factor denotes considerate and friendly behaviour on the part of the leader towards the subordinates.

The findings help to provide the theoretical basis for the behavioural approach as the concept of leadership is considered self-contained and separated behaviour. Indeed, the extensive investigation of consideration and initiating structure has led to some significant results that correlate consideration with the satisfaction of the subordinates and efficient performance with the initiating structure. Meanwhile, the factor that demonstrates a high correlation with effective leadership is undoubtedly consideration. The results show that employees perform well when considerate and friendly leaders who take into account their issues and trust their actions lead them. However, initiating structure shows a limited association with leaders' effectiveness. Until the emergence of the Transformational leadership theory in the late 1970s, two-dimensional conceptualization has shaped research on leadership (Bass, 1985; Burns, 1978; House, 1977).

1.2.2 The University of Michigan Studies:

Academics at the University of Michigan undertook synchronous research with their counterparts at Ohio University. This time, the researchers attempted to delineate the role of leaders in enhancing small groups' performance (Likert, 1967). In roughly the same vein as the

Ohio State studies, the outcomes of Michigan University revealed two central axes of leadership behaviour: the behaviour-oriented towards employees and the one geared towards production.

1.2.2.1 Employee Oriented:

As its name denotes, the employee-oriented type of behaviour puts the followers at the centre of interest. Leaders build stable relationships with their employees. These relationships are based on human interactions in which individual needs are carefully taken into account (Bowers & SeaShore, 1966). From this account, it becomes evident that a comparison between the Ohio studies' outcomes and the results of the University of Michigan would yield a consistent correlation between the consideration factor and employee orientation behaviour as they share a similar humanistic approach.

1.2.2.2 Production Oriented:

The technical and production sides that frame the relationship between leaders and followers bound this behaviour. Thus, leaders are seen as the boosters of productivity and effectiveness, while employees are considered as a means to get the job done and achieve their leaders' goals. In this respect, the point of convergence between the Ohio State and the Michigan studies lies in the same bearings of the production-oriented behaviour and initiating structure factor. Both place a high premium on the fulfilment of the scheduled projects and tasks realistically or neutrally devoid of any personal considerations. The interpretation of the Michigan studies' outcomes reveals that employee and production orientations are opposites. This disparity entails that a leader either displays a heavy focus on employees or concentrates on production. By way of explanation, a leader who gives priority to employees discards output in the same way that a leader who prioritizes production overlooks employees. Therefore, leaders' alignment with staff or output is a matter of leadership behaviour. Nevertheless, subsequent studies provide different argumentations concerning the leaders' choice of employees or production as these two types of behaviour have subsequently been considered independent orientations. This means that leaders can adopt a behaviour in which employees, as well as production, are included. The period extending from the 1950s to the 1960s has been productive with research aiming at exploring how leaders can integrate and incorporate the task and relationship behaviours to stimulate and trigger their followers.

The full range of research that took place during the 1970s invalidated the claims of the behaviour theory, especially the postulation that observable behaviours were sufficient to recognize leaders (Howell & Costley, 2001). Indeed, this theory was clearly on the wane due

to the massive divergence between the behavioural patterns and the various situations. In other words, the main shortcoming of this paradigm was undoubtedly manifested in its colossal failure to build up a universal model of leadership that could fit every situation and context. What is more, the correlation between performance and leadership behaviours was never adequately explicated (Bryman, 1992). Moreover, the conceptualization of leadership effectiveness from the perspective of leaders' high performance attracted widespread criticism as the supportive and participative leaders were highly recommended in many other situations and cases. The Ohio State studies came under sharp criticism despite their widely recognized impact leadership research. Part of the critical debate focused on the link between consideration and initiating structure with the outward criteria. Meanwhile, the main straightforward account was on the part of Bryman (1992), who stated that the major stumbling block that stood in the way of the behavioural paradigm was the absence of situational elements while describing leadership roles and leadership effectiveness. In fact, he brought to light the unsatisfactory account of this paradigm to the liaison between group performance and leadership behaviour.

On that account, subsequent research postulated the necessary linkage between leaders' behavioural styles and the various situations in which they operated. From here, the contingency theory of leadership emerged during the 1960s. In this respect, it is worth recognizing the leading influence of the behaviour theory on the forthcoming leadership theories, particularly the contingency paradigm and the transformational paradigm.

1.3 Contingency Theory:

The contingency theory is built upon the inadequacies of the trait and behavioural approaches. It is an endeavour to fill in what it considers being a considerable void or unaccounted for aspects that typically contribute to leadership effectiveness. The contingency approach to leadership adopts a different line of reasoning from the one advocated by the two previous paradigms (trait and behaviour theories). It accentuates the role of contextual or situational factors that provide the means for leaders to adopt resilient qualities and behaviours in the various circumstances in which they exercise their leadership. In other words, leaders should be able to accommodate their styles with the environment they operate within and the abilities they possess to lead effectively. A multitude of theorists aligns with this new perspective of leadership research. The most important contributions to this theory are attributed to Fiedler (1964, 1967), Hersey & Blandchard (1969), House (1971), Vroom & Yetton (1973), Kerr & Jermier (1978), Yukul (1989).

1.3.1 Fiedler's Contingency Paradigm:

Fiedler's (1964) Contingency model is founded on the contextual variables as well as the personality qualities as determinants of leaders' behaviours and decisions. Fiedler's (1967) maintain that certain environmental variables suit entirely specific labour environments, and therefore, help determine the appropriate leadership style for the analogous situation. Fiedler's (1973) considers further the task and relational orientations under his contingent approach to leadership. His fusion of leader-member relations, task structure, and the position power aspects lends much credence to his account of leadership effectiveness.

It is obvious that the inclusion of the power dimension to the other aspects adds to the significance of contextual and situational settings that affect the styles adopted by leaders (Krumm, 2001). Fiedler's approach sheds light on the genuine reasons why some leaders who prove to be effective in some positions can be utterly ineffective in others. It confirms this approach underlying assumption, which links performance within organizations to the subordinates' capacities and behaviours in given situations.

1.3.2 Hersey and Blanchard's Situational Leadership Paradigm:

Paul Hersey and Ken Blanchard join their efforts to bring forth an advanced version of the situational model of leadership in 1960. The value-added to their contribution lies in the assumption that leadership style should be contingent on situational variables. They argue that leaders ought to take into account their followers' ability or maturity as well as the dynamic situation while deciding which type of behaviour they should adopt. Therefore, the maturity factor of the followers becomes a determinant of leadership styles. This approach suggests a smooth shift from task-oriented to the relational-oriented type of leadership as subordinates show noticeable development. The maturity paradigm has psychological bearings as it measures subordinates' improvement regarding professional skills, experience, and confidence. According to Mckenna (2000), the contingency theory stands out with its exploration of the association between leadership style and situational factors, yet it manifests limited validity.

1.3.3 Path-Goal Theory:

House (1971) comes up with the Path-Goal theory, which underscores situational variables as a mid-range approach between the paradigms that view leadership as an innate set of attributes and the ones that perceive it from a narrow behavioural angle. This approach recognizes many ways to lead an organization, motivate followers, clear away potential hurdles, and boost the subordinates' motivation to fulfil the target objectives. Therefore, this paradigm proposes a necessary mingle between the contingency factors, the internal organizational

components, and the surrounding environment for effective management of organizations. On that account, House (1971) distinguishes between four behaviours that resilient leaders can adapt in different situations. The first pattern refers to the directive behaviour, which is a task-oriented behaviour that focuses on guiding and directing employees to complete tasks successfully. The second paradigm is supportive behaviour, which strikes a balance between the accomplishment of the task and the employee's satisfaction. The participative behaviour engages subordinates in the processes of decision-making and task completion; and the achievement-oriented behaviour, which sets high standards and expects followers to demonstrate high-level performance. House's theory is an utter detachment from the previous static models of leadership that cannot adapt to the persistent situation or meet the followers' needs. The role of leaders is to alleviate challenges that can hinder the achievement of the planned goals while taking into account the subordinates' satisfaction and needs.

1.4 New Leadership Theories:

Scholars broke new ground in their quest to overcome the state of stagnation that leadership research was suffering from since the 1970s. Theorists expanded their horizons while exploring a variety of new variables that embodied the concept of effective leadership. Therefore, contemporary theories covered new ground related to organizational culture, organizational values, work environment, the relation between leaders and subordinates, and leadership versus management roles (Marquis & Huston, 2009). This neo-charismatic model of leadership paved the way for a multitude of theories to stand out. Therefore, Transactional Leadership Theory (Burns 1978; Bass, 1981), Transformational Leadership Theory (Bass, 1985; Bass and Avolio, 1994), Charismatic Leadership Theory (Weber, 1964; House, 1977; Conger & Kanungo, 1987), and Visionary Leadership Theory (Bennis & Nanus, 1985; Sashkin, 1986, 1988; Avery, 2004) were the most prominent theoretical paradigms that indoctrinated the new roles and relations between leaders and followers.

1.4.1 Transactional Leadership Theory:

Max Weber originated transactional theories, also famous as management methods due to their emphasis on the managerial and supervisory responsibilities, in 1947. The mid-seventies and early eighties witnessed a thorough investigation of this concept. McGregor Burns (1978) and Bass (1981) elaborated this approach. Indeed, the German sociologist Max Weber founded his research on three styles of leadership: Traditional, charismatic, and rational-legal, also called bureaucratic. His studies reached the maturity when he first introduced the transactional model of leadership.

Burns (1978) promotes the transactional paradigm by linking managers to high standard purposes such as integrity, honesty, and fulfilment of engagements. He pinpoints the interaction and exchange that takes place in organizational settings between managers and subordinates. Furthermore, he analyzes the exchanges regarding the roles that both leadership and followership can perform to achieve individual and organizational benefits. These sets of interactive behaviours enable leaders to realize their goals, emphasize assigned tasks, boost subordinates' motivation, establish a reward system, and enhance organizational effectiveness. On the other hand, transactional leaders assist their subordinates in actualizing their self-regard, reducing the tension resulting from labour, and stressing on the quality of the product. In all, Burns (1978) perceives the transactional leadership from a traditional managerial practices perspective, which gives priority to administering operations and transactions occurring daily.

In the 1980s, extensive studies have been undertaken to uncover the various dimensions embodying transactional leadership. Therefore, prominent scholars, including Bruce Avolio and Bernard M. Bass, have embarked on exploring the major aspects that characterize this paradigm. The contingent reward is considered as a mechanism that provides a set of incentives to employees by rewarding them once objectives are attained. Active management entails leaders' recognition of potential challenges and taking measures to adjust the undesirable or inadequate course of actions or situations. The third dimension refers to passive management in which leaders avoid intervening in labour unless urgent or inappropriate situations emerge. Bass's conceptualization of transactional and transformational leadership paradigms differs noticeably from that of Burns, who views them as mutually exclusive. In other words, Bass (1985) considers that effective leaders should adopt both types to guarantee the achievement of goals by highly motivated and engaged followers. In the same vein, Yukl (1998) confirms that one leader can implement both types at any time and place. The kind of motivation promoted by transactional managers aims at making the perfect link between achieving the assigned task and distributing roles for the sake of accomplishment of the final goals. According to this paradigm, the contractual agreement between leaders and followers entails the elaboration of an intrinsic mechanism of compensation and reward that ensures the realization of organizations' objectives.

1.4.2 Transformational Leadership Theory:

Scholars who appertain to the transformational school of leadership, namely Avolio, Bass, Burns, and Yukl, identify effective leadership with the notion of change. They accredit efficiency to those leaders whose integral mission includes changing the status quo in their organizations. In other words, the transformational model introduces a total innovation and

transformation to the existing structure or culture (Bass, 1985). In the same vein, Barker (1990) states that the transformational paradigm revolves around change, innovation, and empowerment of others. Therefore, transformational leadership is referred to as the process that enables leaders and subordinates to engage in active connections based on trust and motivated morality. Burns (1978) confirms this when he states that “transformational leadership occurs when one or more persons engage with others in such a way that leaders and followers raise one another to higher levels of motivation and morality” (p.20). This type of leadership shares a high standard vision with the follower, builds bridges of trust and confidence in their decisions and achievements. Indeed, the hallmark of this style is communicating a clear vision to members of the organization in a way that prompts them to embrace it and work towards its accomplishment. In this sense, transformational leaders adopt proactive approaches in their ongoing strive to affect subordinates and change the surrounding environment. A transformational leader’s role in improving the followers’ values and self-esteem while taking into consideration individuals’ requirements is also highlighted in this paradigm. Furthermore, this model pinpoints the leveraging of personal needs as a shift from the transactional model to the transformational model takes place “when these needs are elevated, the leadership exchange begins to shift from transactional to transformational leadership” (Bass & Avolio, 1997, p.26).

Bass’s (1985) outstanding contribution in the field of leadership is founded upon Burns’ preliminary work that lays the groundwork for his transformational model to take shape. He builds on Burns’ (1978) description of a transformational leader as “one who raises the followers’ level of consciousness about the importance and value of desired outcomes and the methods of reaching those outcomes” (p.141) to formulate his concept of effective leadership. Therefore, he stresses the decisive roles of leaders in shaping their relations with followers, motivate and inspire members, induce them to embrace the organizational vision and work towards realizing it, and prompt them to leave behind their personal interests in order to achieve goals.

Bass and Avolio (1994) identify four defining features (also famous as the ‘Four Is’) that characterize transformational model. These are Idealized Influence in which a leader serves as a role model. Inspirational Motivation of the followers through the introduction of captivating vision and increasing optimism vis-à-vis the accomplishment of goals. Intellectual Stimulation of the subordinates by inducing them to be creative and think out of the box. Individualized Consideration of individuals’ needs and personal interests. Transformational leaders exert their influence using these patterns. Theorists and scholars approach the dichotomy transactional and transformational as they attempt to provide an analytical contrast of their effect on organizational performance and subordinates’ management and account for which model is

regarded as more effective and widely used by leaders and preferred by followers. The outcomes prove that transactional leadership generates more consent and approval on the part of the researchers who investigate leadership effectiveness. It is seen as a booster of innovation, creativity, and innovation. Meanwhile, when considering the subordinates' satisfaction, studies reveal that employees favour being managed by a transformational leader rather than a transactional one. For this reason, Bass (1990) concludes that the transformational model is more effective than the transactional model. However, Bass (1985) points out that the transformational and transactional patterns should not be conceived as self-contained or opposites. He further argues that the transformational style is founded on the transactional one. He also contends that a leader can resort to any of these behavioural patterns depending on the situation. What is more, he claims that transformational leadership would rather be inadequate and useless in default of a transactional basis. Thus, contemporary management theories posit the necessity of incorporating both types of leadership to establish an effective model of leadership. Nonetheless, criticism regarding any perceived shortcomings related to this model is disclosed. Firstly, there is a striking scarcity of empirical findings depicting the effect of this model of leadership on teams, groups, and organizations (Yukl, 1999). Yukl further criticizes the shortage of adequate accounts of situational and contextual factors and their impact on leadership performance.

1.4.3 Charismatic Theory:

Max Weber (1947) gives an unorthodox account of effective leadership that entails charismatic personality and compelling characteristics as indispensable prerequisites for leaders to construct and consolidate their positions among followers. Weber's initial discussion of charisma discourse considers this concept as "the gift of grace" that characterizes only a few people. These leaders would emerge in crises and bring forth something "new" to the critical state in which the entire existence of an organization can be brought into question. Thus, he associates the emergence of charismatic leadership with critical moments, crises, and "in times of psychic, physical, economic, ethical, religious, [or] political distress" (Weber, 1968 pp, 18-19). Weber's pioneering contribution suggests the followers' recognition of leaders' distinctive qualities as well as their appreciation of the observable behaviours as primary sources of settling an uncontested leadership. In this regard, Weber (1964) determines three forms of power that subordinates can approve and identify their leaders with tradition, charisma, and legal-personal/rationality. Tradition gives meaning and validity to the current laws and state through emphasizing past behaviours. Charisma refers to a "special" individual who possesses distinct power and right to lead. Legal-personal highlights instrumental rationality and justifies the way

to achieve an end. Weber further relates charisma to the leader's capacity to elaborate clear visions and missions, possess distinctive personal attributes, and earn followers' acknowledgement of their leadership. Even more, leadership gains new dimensions with this approach as followers attribute heroic features to leaders' decisions and behaviours. The strength of this new perspective lies in the assumption that the legitimacy of one's leadership should be derived from followers rather than being imposed or appointed by an external authority or power. This new approach to leadership establishment and effectiveness provides a new outlook for the power of change that charismatic or charming leaders can bring forth to their organizations. Therefore, many relatively recent types of research have established an increasing linkage between organizational settings and charismatic patterns of leadership behaviours, especially with the development of transformational and visionary theories. Indeed, scholars have embarked on searching into the conceptualization of charismatic leadership since the seventies. In this regard, House (1977) maintains that the attributional groundwork for charisma may result from followers' attributions or the leader's behaviour. However, an amalgamation of these two factors is also a defining contribution to the construction of a charismatic model of leadership. Therefore, this account does not see individuals as charismatic unless followers ascribe this feature to their leaders. The dramaturgical perspective considers leaders and followers as critical ingredients to shape charismatic leadership. House's (1977) psychological account of the impact of charismatic leaders on followers establishes an explicit association between the need for power and charismatic behavioural patterns. In other words, the principal motive that characterizes charismatic leaders and distinguishes them from non-charismatic ones is the great need for authority and influence. House refers to these types of leaders as these "who by force of their personal abilities are capable of having profound and extraordinary effects on followers" (p. 189). They have the capacity to exercise their impressive and influential talents of persuasion to generate positive reactions and satisfaction from their followers. Indeed, House's (1977) pioneer account on the behaviour that charismatic leaders display as well as the mechanisms and means that they make use of to generate the desired performance and satisfaction on the part of their followers has shifted this theory. It is obvious that the emotional interplay between leaders and followers makes up the basis for this approach. He stresses the inspirational and motivational skills that a charismatic leader exhibits by providing a model to followers. Many theorists have thought of House's theory as the primary underpinning upon which the subsequent research on charisma discourse would be built (Conger & Kanungo, 1998; Bass, 1985; Tichy & Devanna, 1986).

House (1977) hypothesizes that charismatic leaders utilize a cluster of behaviours that demarcate them clearly from other types of leaders. These features make up the underlying

assumptions upon which his comprehensive theory is grounded. The significance of his approach lies in its fundamental contribution to the study and exploration of the charismatic model of leadership in formal organizational settings. Therefore, he posits that dominant and self-confident leaders possess an unyielding faith in the moral righteousness of their convictions. What is more, he introduces leadership by modelling as a charismatic behaviour that paves the way for followers to be on the right track. Thus, leaders should act as role models if they wanted followers to assume their values and expectations. Furthermore, they promote their self-image among their subordinates as they strive to build a favourable perception of their leadership. They also have the power and agility to instil their ideological goals in subordinates. Another behavioural pattern that falls within the same range of charismatic attitude is their ability to communicate the easiness and possibility of achieving high performance and realizing the planned goals. Last but not least, he maintains that charismatic leaders are quite distinguished by their incredible capacity to motivate followers and arouse motives that facilitate their tasks and lead them to believe in their competencies and faculties to accomplish missions.

Conger & Kanungo (1987) initiate a threefold model of the behavioural theory of charismatic leadership. They theorize a three-stage process through which a leader should proceed to be perceived as having distinctive attributes and extraordinary charisma by followers. As previously mentioned, they base their model upon the systematic observation of three clear patterns of behaviour that subordinates should consider as captivating and, therefore, conducive to achieve the leadership vision and goals.

According to this approach, the initial phase of this process starts with the leaders' diagnosis of the environment and appraisal of the status quo to be mindful of the followers' needs, tendencies, and satisfaction. This preliminary step also aims at detecting potential growth opportunities by weighing the available assets and possible constraints. The ultimate objective of this stage is to develop well-defined goals. During the subsequent stage of this process, leaders reach the decisive phase of formulating and articulating strategic visions and goals. Undoubtedly, it is at this level that leaders stand out as charismatic individuals with piercing visions and striking communicative competencies that allow them to convey their idealized plans in an inspiring and captivating fashion to their subordinates. The attribution process is quite visible at this stage as embracing the leaders' goals implies an implicit recognition of their charisma and leadership. The ultimate step of this model entails the execution of the planned goals and formulated vision through a role modelling strategy. Therefore, a charismatic leader paves the way for followers through taking risks and demonstrating a unique knowledge and

competence while leading them towards the straightforward path of goals achievement. They strive to gain their followers' trust and commitment to the mission throughout this process. Meanwhile, Parry & Bryman (2006) highlights the downside or the dark side of charismatic leadership. "Conversations about the dark side of charisma, narcissism, and pseudo-transformational leadership have led inevitably to a theoretical discussion about the "right" and "wrong" of leadership, rather than just the utilitarian effectiveness of organizational leadership." (p. 456).

According to Bass (1985), pseudo-transformational leaders use manipulative and coercive techniques to influence others to serve their interests. They employ their charismatic qualities, authority, and hierarchy to create unquestioning obedience and dependence on the part of their followers to serve their own agendas. This ethical debate related to the double-edged aspects of charismatic leadership has had an impact on this theory.

1.4.3.1 Visionary Theory:

The visionary paradigm has gained growing importance in the field of leadership since the 1980s. This trend is characterized by the interrelatedness and interchangeability of this notion with the concept of charisma throughout the theoretical and empirical literature. A constellation of scholars has been theorizing the fundamental change that a visionary leader can bring to the overall performance and productivity of an organization. In this line of argument, Bennis & Nanus (1985), Sashkin (1986), and Avery (2004) have advocated this trend, each from their perspective.

Bennis & Nanus (1985) provide an account of leaders' effective strategies that contribute directly to the empowerment of organizations. They label the first plan of action **attention through vision**. They argue that it is through articulating an attractive vision that leaders induce followers to achieve results, develop the commitment to the formulated vision, and institutionalize it (1985, pp. 140-141).

The second strategy is **meaning through communication**. The influential capacity of leaders to create and communicate the meaningful interpretation of events, obstacles, and goals pave the way for subordinates to adopt the vision and work towards realizing it.

The third strategy refers to **trust through positioning**. A real vision reflects the credibility of a leader. Therefore, a leader gains the followers' trust with the help of plausible behaviours that foster their position and vision. The last strategy is the **development of the self through positive self-regard and the "Wallenda- Factor."** Effective leaders build their visions around the notion of success rather than fearing failure. In this regard, having a high

degree of self-confidence and trust in the vision are key determinants of visionary leadership. Sashkin (1986) delves into the cognitive processes that contribute to the formulation of vision. He argues that a visionary leader should have four cognitive abilities. The first ability is an expression of the vision. This skill entails conveying the vision employing a clear course of action and interaction with the stakeholders to make it compelling and authentic. The following cognitive skill is the explanatory phase of the process. The leader makes everything clear to followers, including the assigned tasks. The third ability refers to the extension of the vision to several similar situations and contexts. The last skill has to do with the expansion of the vision to other different circumstances. Sashkin (1988) conceptualizes an effective leader as someone with a clear vision who can communicate it smoothly to followers and expand it to different contexts and circumstances. He highlights the key role of the intuitive skill in making leaders sensitive to situational obstacles and the fluctuating environment in which they operate. Visionary leaders are resilient and flexible to changing and uncertain circumstances; they work towards putting their visions into practice at the strategic and tactical levels of their organizations. Sashkin (1988) maintains that leadership, which is described as visionary, should be a booster of the followers' self-regard and an engaging power to embrace and implement its mission and vision. In the same vein, Robbins & DeCenzo (2001) reiterate the three skills previously discussed by Sashkin (express, explain, and extend the vision) and considers them as the hallmarks of visionary leadership.

Avery (2004) develops a four-paradigm theory of leadership in which he makes a clear-cut distinction between visionary, organic, classical, and transactional models. For the sake of brevity and pertinence, this paper focuses on the visionary paradigm while it provides a concise snapshot of the three others. According to Avery (2004), organic paradigm distributes leadership among several members of an organization, rather than having it centralized in one leader. Concerning the classical paradigm, it denotes the predominance of a person or an "elite" with distinctive features of leadership. The transactional leaders consult followers at different levels of organizations before making decisions, yet they remain in charge of the final call. The underlying theoretical underpinnings of visionary leadership revolve around the cruciality of having a future vision and engaging subordinates into an emotional commitment to the vision. Avery (2004) maintains that the roles of visionary leaders include inspiring and motivating followers while meeting their essential needs. In this sense, employees' commitment is derived from having strong-shared vision and values. Avery (2004) highlights the collaborative nature of visionary leaders who share, discuss and seek unanimity before making decisions. Visionary leadership is quite distinct from other types by the ability to empower followers and provide them with sufficient responsibility and autonomy to carry out the vision. Indeed, what makes

Avery's (2004) entirely separate from the other paradigms is the claim that a leader can employ components of several styles, rather than adhering to a unique style. Therefore, he introduces the pattern of a visionary leader who utilizes transactional and classical tactics to carry out the vision.

Meanwhile, Nadler & Tuschman (1990) list some limitations linked to this paradigm. The first limitation is related to the emotional frustration that subordinates can face due to placing high and unreasonable expectations on leaders. Thus, in the case of failure, or when things go wrong, the impression that their leaders have high competencies and strong visions will fade away, thus putting their commitment to the organizational values and visions at risk. What is more, Collins (2001) refutes any association between leadership effectiveness and visionary paradigm. He contends that other models of leadership, such as the transactional type, have proven their effectiveness in many organizational settings despite the lack of visionary features in their approach of leading.

Clearly, the notions of vision and visionary leadership have reshaped research on leadership as having a well-articulated vision has quickly become a prerequisite for organizational success (Humphreys, 2004). However, Yukul (1999) criticizes the narrative and story-like basis upon which visionary leadership paradigm has been built. The popularity of this theory has been at stake due to the lack of scientific and empirical foundations that can adequately substantiate and justify its implementation by leaders. Meanwhile, many theorists and researchers categorize visionary leadership as a model of transformational leadership that contributes to the achievement of organizational goals effectively (Bryman, 1992; House & Aditya, 1997; Kantabutra & Avery, 2011). On that account, a comprehensive approach to leadership implementation has been suggested (Hooijberg et al., 1997). This new perspective has called for holistic handling of transactional, transformational, and visionary models to account for the influence that top-level leadership can have on followers and organizations.

2 Leadership Styles: The Full Range Leadership Model

The Full Range Leadership Theory (FRLT) is the fruit of Bass's (1985) effort to enhance and develop Burns' (1978) underlying assumptions of leadership into a well-built model (Avolio & Bass, 2004). Meanwhile, Bass rejects Burns' postulation that conceives transformational leadership and transactional leadership as two styles appertaining to the same continuum but with different ends. He perceives both types like detached and independent dimensions reflected in leaders' behaviours (Bass, 1985).

It is noteworthy that this model is derived from several well-known dichotomies that have long characterized and dominated the research on leadership styles, namely Autocratic versus

Democratic, Task versus Relational, Directive versus Participative styles (Avolio & Bass, 2004). The extensive literature determines three constituents as the essential underpinnings that underlie this theory: Transformational, Transactional, and Passive-Avoidant leadership (Bass 1985, Howell & Avolio 1993).

2.1 Transformational Leadership:

Most research findings confirm that the experience of working for transformational leaders can be very satisfactory and rewarding. The reason for this lies in their ability to stimulate the positive energy of the followers and engage them in the planned goals. Furthermore, they boost their followers' performance by motivating them and upgrading their independence and confidence. Bass's (1985) initial conceptualization of the transformational leadership construct entails three features: individualized consideration, charismatic component, and intellectual stimulation. These constitute the building frameworks for his Multifactor Leadership Theory and Questionnaire (MLQ). Subsequently, some rectifications give birth to several versions, yet the MLQ 5x remains the most popular version among scholars and researchers (Bass & Avolio, 1995). It comprises five components: idealized influence behaviours (IIB), idealized influence attributed (IIA), intellectual stimulation (IS), individualized consideration (IC), and inspirational motivation (IM).

2.1.1 Idealized Influence:

The defining characteristics of this type of leader are:

- setting a model for subordinates to follow
- establishing trust and confidence among followers and between the leader and followers
- acquiring an attractive and charismatic profile

They embody high moral standing and ethical attributes that employees perceive in them (Bass & Avolio, 1995). Furthermore, Bass (1985) refers to this category of leaders as having great doses of idealized influence or charismatic capacity to instil loyalty, respect, and trust in their followers. He argues that unlike charismatic leaders, transformational leaders have the ability to empower their associates. Idealized influence attributed (IIA) leaders build others and take special attention to the needs of the group. Idealized Influence behaviour (IIB) leaders hold deep moral and ethical values that they indoctrinate to followers.

2.1.2 Intellectual Stimulation:

This type of leader urges their subordinates to believe and recognize their values. They prefer proactive subordinates who create, think out of the box, and work towards figuring out

solutions to the various problems they encounter in their daily handling of. They appreciate intelligent and rational actions as well as problem-solving competence. Therefore, they adopt a supportive attitude of new thoughts and approaches while they stimulate followers to create and innovate away from any negative pressure or criticism (Avolio, Waldman, & Einstein, 1988).

2.1.3 Individualized Consideration:

These considerate leaders take into account the personal and specific needs of each participant. They adopt a one-to-one approach as they embark on coaching and mentoring individual members. They are well-aware of the uniqueness and attributes of everyone and take special care of individuals' needs. They embrace individualized interactions, provide necessary feedback, delegate tasks, and establish close and direct relationships with followers as they keep track of their progress and performance.

2.1.4 Inspirational Motivation:

These leaders are the source of motivation and encouragement for the followers as they prompt them to be proactive and take the initiative as ways to confirm their commitment to the leadership vision and organizational mission. Indeed, they induce and galvanize subordinates to work towards the realization of challenging goals while they maintain team spirit. They communicate smoothly through emotional influence and expressive symbolic messages and images (Bass & Avolio, 1990).

2.2 Transactional Leadership:

Bass (1985) maintains that the Multifactor Leadership theory aims at assessing three primary dimensions related to transactional leadership: contingent rewards, management by exception- active, and management by exception- passive.

2.2.1 Contingent Rewards:

These leaders motivate their followers by offering rewards for the accomplishment of goals and achievement of the mission. They provide support and assistance to their subordinates in return for the necessary efforts a strong commitment to the organization. Moreover, they acknowledge hard work and goals achievement.

2.2.2 Management by Exception (active):

These leaders anticipate severe problems and take counteracting and corrective actions when inadequate situations or nonconforming behaviours and events take place. They set clear

and strict standards that followers should abide by strictly. They also take measures against those who do not adhere to these criteria.

2.2.3 Passive Management (passive):

These leaders adopt a wait-and-see approach before taking any measures to remedy inconsistencies and irregularities. This kind of reluctant behaviour is very typical of this category of leaders and does have a significant impact on the employees and the organization as a whole. They are unable to set clear goals and standards or adopt a reactive behaviour as they usually react after the inadequate situations persist (Bass & Avolio, 2004).

2.2.4 Laissez-Faire Leadership:

Laissez-Faire leaders, also notorious for being Passive-Avoidant or non-transformational leaders, exhibit passive behaviour and professional detachment in the workplace. This type of leader is utterly devoid of power and authority, which instigates subordinates to resort to different sources to decide on important issues and decisions. What is more, the group most often makes momentous and influential decisions as the leader avoids responding instantly to immediate and unexpected affairs and concerns. Other responsibilities these leaders do not assume are evaluating performance, guiding employees, and criticizing the low performance. Simply put, this pattern suggests the absence of effective leaders who can take action and influence others. In contrast with the motivating transformational leaders and the efficient transactional managers, Laissez-Faire leaders show a lack of willingness and interest to motivate subordinates or satisfy their needs. They adopt clear avoidance strategies to escape getting involved in serious situations where their leadership competency can be challenged or highlighted. They also avoid establishing standards to monitor their followers or assess their performance. In addition, the lack of incentives and stimulative tools undermines their leadership (Bass & Avolio, 1997). In the meantime, these leaders manage to be on good terms with their subordinates to guarantee smooth governance and easy monitoring of the workplace situations.

3 Leadership in Morocco through the Lens of the GLOBE Study:

GLOBE, which is the acronym for the “Global Leadership and Organizational Behavior Effectiveness,” is an extensive research project that has been surveying more than 17.300 middle managers belonging to sixty-two societies for roughly a decade (1993-2003). GLOBE has targeted 951 organizations operating in three strategic sectors, namely food processing, finance, and telecommunication. The mastermind behind this exhaustive project is Robert J.

House of the Wharton School of the University of Pennsylvania, who has supervised some 14 groups throughout the five continents. Up to the conduct of this paper, GLOBE has been deemed the most thoroughgoing empirical study of leadership in organizations. It has mobilized 170 social researchers and coordinators, spread over 10 “Societal Clusters” to collect, process, and analyze data (Latin America, Anglo, Latin Europe, Sub-Saharan Africa, Middle East, Confucian Asia, and Southern Asia).

One of the central objectives of GLOBE is to probe the interrelationship between clusters of societies, organizational culture, and leadership within organizations. It accounts for values and practices of leadership and distinguishes what can be categorized under the label “Universal Attributes” from those characteristics typical of particular societies. The notion of universally agreed-upon features that contribute to the construction of a global profile of what humans conceive to be effective leadership has been a significant priority in this comprehensive research. To this end, a three-stage study procedure has been initiated by submitting an extensive list of 112 characteristics to the respondents. In this pilot study, the participants have singled out 21 attributes as “first-order factor” or “primary dimension” of leadership:

Integrity	Inspirational	Modesty
Visionary	Performance-oriented	Malevolent
Team-integrator	Decisive	Autonomous
Administratively competent	Diplomatic	Autocratic
Collaborative team orientation	Self-sacrificial	Self-centered
Humane	Status conscious	
Conflict inducer	Procedural	
Face saver	Non-participative	

This filtered list denotes a significant contribution to each society taking part in this project to the discernment of the primary constituents or attributes of effective leadership. This initial phase is devoted to the development of the proper research measurements and instrumentations. In the subsequent stage, the 21 “primary dimensions” are further refined and shortened into six particular order leadership dimensions. These are referred to as leadership styles (Charismatic/value-based, Team Oriented, Participative, Humane, Autonomous, and Self-Protective). The ultimate stage has been characterized by the analysis and assortment of the effect of particular leadership patterns and behaviours on the followers’ productivity and performance. This far-reaching cross-cultural leadership study has been built on a robust

conceptual framework that lays the foundations for the 27 hypotheses. An extensive review of the literature has settled the Implicit Theory (both leadership and motivation theories) and Structural Contingency Theory as the ideological structures of this research. An outstanding achievement of GLOBE is the expansion of the implicit leadership theory and research into cultural discussions and studies while it seeks to detect cultural universals related to leadership. Indeed, it has played an outstanding role in stimulating the shift of scientific research from focusing on the individual drives of leaders to a more culturally oriented debate and exploration of the universal features, values, and practices underlying leadership.

GLOBE's researchers have agreed on a description of leadership that conceives it as "the ability of an individual to influence, motivate, and enable others to contribute toward the effectiveness and success of the organization of which they are members" House et al. (1999, p. 188). It is worth mentioning that this account of leadership is exclusive to the organizational context.

This massive cross-cultural project ensures a worldwide representation of the participants covering all the major regions of the five continents to guarantee massive accumulations of data and comprehensive processing and analysis of the research findings. The managers of the target organizations provide an account of the cultural values and practices that they perceive to be prevailing or should be prevailing in their societies. To achieve this goal, the organizers of the project have conducted quantitative survey-based research in which the respondents have responded to the questionnaire questions of "what is/are" or "what should be" the generally recognized behaviours and practices which are typical of their societies. The purpose is to come up with empirically substantiated theories that can account for the effect of specific cultural factors on organizational culture and leadership effectiveness in the various studied societies.

In the first volume, "Culture, Leadership, and Organizations: The GLOBE study of 62 Societies, Sage Publications, 2004" J. House et al., includes a thorough description of the multi-method approach adopted to undertake their research project. Therefore, quantitative and qualitative methods and measures are used to collect and assess the hypotheses. The questionnaires have handed out separately to middle managers belonging to the same organization to avoid any potential bias. The survey adopts a 7-point scale to distinguish the 21 items according to the degree of desirability, ranging from the most globally desirable to the least globally desirable.

Fortunately, Morocco has been part of this research, which implies that the GLOBE's outcomes have a direct impact on the understanding and contextualization of leadership effectiveness or lack of effectiveness at the national and international settings. Moroccan

kingdom's pattern of leadership is studied and analyzed under the "Societal Cluster" of the Middle East, which includes five societies (Turkey, Qatar, Egypt, Kuwait, and Morocco); hence, the immense significance and relevance of this project to the current dissertation. The importance of GLOBE for this paper is also derived from its deeply-rooted theoretical and empirical origins in Hofstede's outstanding 1980 multi-dimensional model (as thoroughly accounted for in the organizational culture section). It is a prolongation of Hofstede's six cultural paradigms into nine cultural dimensions. The extensive cultural inventory includes Power Distance, Uncertainty Avoidance, Humane Orientation, Collectivism (institutional), Collectivism (In-group), Assertiveness, Gender Egalitarianism, Future Orientation, and Performance Orientation).

Table 2: GLOBE's Leadership Dimensions: Middle East Cluster. Adapted (abbreviated) from Den Hartog et al., (1999)

Middle East (Societal Cluster)	Charismatic	Team- Oriented	Self- Protective	Participative	Humane- Oriented	Autonomous
Turkey	5.96	6.01	3.58	5.09	4.90	3.83
Kuwait	5.90	5.90	4.02	5.03	5.21	3.39
Egypt	5.57	5.55	4.21	4.69	5.14	4.49
Morocco	4.81	5.15	3.26	5.32	4.10	3.34
Qatar	4.51	4.75	3.92	4.76	4.66	3.38

3.1 The six Leadership Scales/Styles:

Performance-Oriented Style: other scientists among GLOBE's members prefer to label it "Charismatic/Value-Based"). This style "reflects the ability to inspire, to motivate, and to expect high-performance outcomes from others based on firmly held core values." (House et al., 2004, pp. 61). It places a high premium on high-level performance. The recipe for achieving this is by setting high profiles and top-notch core values that everyone should embrace and work towards their realization. This type of leader is well-acquainted with the inspiring and motivating strategies that help to boost the subordinates' performance. They do this by providing appealing visions and inducing organizational members to innovate and seek excellence. This factor comprises six minor features: visionary, inspirational, self-sacrifice, integrity, decisive, and performance-oriented.

The GLOBE survey assigns a score of 4.81 (well above the 4.00 mid-point) to Morocco, thus referring to the invaluable addition of this attribute to effective leadership in this country.

However, this result does not necessarily reflect on the Middle East cluster that seems to place less emphasis on the link between the charismatic dimension and leadership profile.

Team-Oriented Style: this style boosts supportive and coordinated teamwork culture among the members of their organizations to induce common purpose and joint efforts. This primary dimension has five subscales: team collaborative, the team integrated, diplomatic, malevolent, and administratively competent.

With the noticeably high score of 5.15, team orientation has been placed as an essential attribute that is conducive to outstanding leadership in Morocco. However, as can be deduced from the table 2, it has had a limited contribution to the perception of leadership throughout the Middle East cluster. It is noteworthy that the prevalence of this style in the Moroccan context is mainly due to the nature of Moroccans who identify themselves with the boundaries and extensions of their families.

Humane Oriented: these leaders are thoughtful towards their subordinates. They are considerate towards everyone in the organization and show kindly regard for their feelings and needs. There are two subclasses under this dimension Modesty and humane oriented.

Morocco scores 4.10 on the humane orientation (that is a little higher than 4.00 mid-point). This shows that this attribute does not have a significant addition to the perception of effective leadership in Morocco. Yet, it also manifests Morocco's aspiration to acquire leaders with more humane orientations.

Autonomous Style: this is a newly integrated dimension into the defining characteristics of leadership. It refers to the independent, self-determining, and individualistic type of leaders. The worldwide report considers it as a negative factor as it fosters self-centrism.

In comparison to the other four countries that constitute the Middle East cluster, Morocco scores the lowest on this style. With the low score of 3.34 (below the 4.00 mid-point), this dimension does not only have a little influence on leadership profile but also constitutes a clear impediment to effective leadership in this country.

Self-Protective Style: this dimension includes five subdivisions: self-centred, status-conscious, conflict inducer, face-saver, and procedural. Protection refers to the preservation of the individual as well as the group/organization. It denotes that the safety of the individuals is part of the security of the organization.

With the low score of 3.26 (that is below the 4.00 mid-point), Moroccan respondents perceive this dimension as having a marginal and limited contribution to effective leadership. What is more, it is regarded as an inhibition to outstanding leadership. Morocco scores the lowest on this dimension in the Middle East cluster. This proves the negative impact that this style (impediment) inflicts on the configuration of leadership in this Arab country.

Participative Style: these leaders tend to delegate tasks and responsibilities and do not exercise a monopoly on decision-making. They involve others in the execution of the plans. This primary factor entails two subclasses, autocratic and non-participative.

With a significantly high score of 5.32, Participative has been deemed an essential addition to effective leadership in Morocco. It is worth mentioning that Morocco exceeds all countries belonging to the Middle East cluster and scores the highest on the significance of the participative style.

GLOBE draws a universal picture of a leadership profile that is characterized by distinctive charisma, a heightened sense of participating and sharing with individual members and teams, performance booster and seeker, and a willingness to display the humane and compassionate sides of leadership.

3.2 Culture in Morocco through the Lens of the GLOBE Study:

The major concern of GLOBE study is to determine which standards to adopt and measure to account for cultural congruence and disparity among the 62 “societal cultures”. The answer comes in the form of nine cultural dimensions categorized as Practices “as is” and Values “as should be”. Thus, “societal practices” refer to how respondents rate their current practices, whereas “societal values” reflect their perceptions and preferences of future tendencies. House et al. (2004) have provided concise definitions of each dimension:

Uncertainty avoidance: refers to the extent to which members of a society attempt to avoid uncertainty by relying on established social norms and practices.

Power distance: is the degree to which members of a society expect and accept an unequal distribution of power.

Institutional collectivism: reflects the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action.

In-group collectivism: is the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families.

Gender egalitarianism: refers to the extent to which society promotes gender equality and minimizes gender role differences.

Assertiveness: is the degree to which individuals in organizations or societies are assertive, confrontational, and aggressive in social relationships.

Future orientation: displays the degree to which individuals in organizations or societies engage in future-oriented behaviours such as planning, investing in the future, and delaying gratification.

Performance orientation: reveals the extent to which an organization or society encourages and rewards group members for performance improvement and excellence.

Humane orientation: the degree to which individuals in organizations or societies encourage and reward individuals for being fair, altruistic, friendly, generous, caring, and kind.

GLOBE researchers have surveyed Moroccan respondents about societal practices, values, and come up with the following results:

Table 3: GLOBE STUDY (House et al., 2004): Scores for Cultural Practices and Values in Note. Means range from 1 to 7 where 1= low, 4= average (mid-range), and 7=high.

	Country PRACTICE Score	Country VALUE Score	Discrepancies between practices and values
Power Distance	5.80 (high)	3.11	2.69
In-Group Collectivism	5.87 (high)	5.68	0.19
Institutional Collectivism	3.87 (low)	5.00	-1.13
Uncertainty Avoidance	3.65 (low)	5.32	-1.67
Future Orientation	3.26 (low)	5.85	-2.59
Gender Egalitarianism	2.84 (very low)	3.74	-0.9
Assertiveness	4.52 (mid-range)	3.44	1.08
Humane Orientation	4.19 (mid-range)	5.51	-1.32
Performance Orientation	3.99 (low)	5.76	-1.77

Hayat Kabasakal has chiefly been interested, along with other researchers, in the reexamination of GLOBE's findings related to the Middle East and North Africa. According to Kabasakal et al. (2012), the Mena region reflects harmonious results concerning societal, cultural practices, and values due to economic, socio-cultural, political, and religious intersections. They compare Moroccan scores with the rest of Mena region countries and conclude that it possesses low future orientation and institutional collectivism. In contrast, it scores high on power distance and In-group Collectivism (Kabasakal et al., 2012, p 525). In a similar vein, Kabasakal & Bodur (2002) state that the Middle East countries are characterized by In-group orientation, masculinity, and tolerance of ambiguity. In the same line, but more specifically, the outcomes attributed to Morocco are exceptionally high on power distance. As illustrated in Table 3, with a score of 5.80, this culture is classified among the most hierarchical cultures in the world. In fact, it exceeds all the 61 countries taking part in this study. Morocco's elevated score on this dimension reflects the general inclination to accept and obey the leading authority as part of the taken-for-granted cultural legacy and inherited legitimacy for power. Another implication of the prevalence of this dimension is the widespread tolerance towards the rigid bureaucracy and procedural system in this country. Accordingly, Balambo (2014) refers to the legitimacy of obedience to authority as an inherent characteristic in Morocco. Meanwhile, Hammoudi (1997) highlights the juxtaposition of "absolute authority" and

“absolute submission” that features the prevailing authoritarianism in this country. At the organizational level, steep power distance is an indication of the total submission of the subordinates to their management. Morocco also scores high on In-group Collectivism (5.87). In such a collectivistic society, the family constitutes the centre of gravity for the individuals who identify themselves with in-groups such as neighbourhoods and schools (Barakat, 1993). At the organizational level, a collectivistic culture favours strong relationships and connections over performance and future orientation. This means that job and promotion decisions can be based on relational and interdependent networks of relationships (family ties, friendship, etc.). Table 3 shows that two societal practices are ranked in a medium position in Morocco: Humane Orientation (4.19) and assertiveness (4.52). On the one hand, the moderate ranking of Morocco at the humane orientation displays the average extent to which this culture can be supportive, considerate, and compassionate towards its members (House et al., 2004). It is a supportive culture where family members, acquaintances, and neighbours assist each other (Coman, 2008). On the other hand, GLOBE concords with Hofstede’s 2004 categorization of Morocco as having a heightened level of assertiveness. This confirms the notion that males are synonymous with toughness, forcefulness, and aggressiveness, whereas females are associated with submissiveness. Table 3 also depicts five societal practices that display low scores in GLOBE study. Therefore, Institutional collectivism scores lower than the average (3.87), thus giving priority to individual goals over collective purposes and making the pace of life fast in this type of culture. In terms of Performance Orientation, a low-scoring society such as Morocco (3.99) emphasizes tradition and family and exhibits inferior levels of competitiveness and productivity in its economy (Mansour, 2004). Concerning Uncertainty Avoidance, a low-ranking country like Morocco shows a disposition for change and new ideas; yet, it manifests a noticeable reluctance for risk-taking (in economy and politics) and an unwillingness to set up more rules to confine behaviours (Sully Deluque & Javidan, 2004). As far as Future Orientation is concerned, Morocco has a low score (3.26) that mirrors the importance given to the current issues and events at the expense of future scheduling and planning. Individuals in this culture are present-oriented as they live day-by-day while attempting to make their lives as manageable as possible. They are interdependent and count on others in their daily routine, work, and interactions. The low level of future orientation influences negatively the economy of this country as the development ratios stagnate, which results in a psychologically and socially unhealthy society (Ashkanasy et al., 2004). Ultimately, Morocco scores among the most masculine cultures in GLOBE’s population. This is reflected in the lower score of Gender Egalitarianism (2.84). This remarkably low rate directs attention to the unbalanced statuses between males and females. Men are afforded privileged positions of power and authority,

3.3 Summary of Culture and Leadership in Morocco

*Table 4: Summary of Culture and Leadership in Morocco
Based on Hofstede's (2010) Empirical Findings*

<u>Culture in Morocco According to Hofstede</u>	<u>Leadership in Morocco According to Hofstede</u>
<u>Six Cultural Dimensions</u> <u>Power Distance</u> (with a score of 70) ✓ Morocco is a very hierarchical culture. ✓ Autocratic leadership in this culture <u>Uncertainty Avoidance</u> (with a score of 68) ✓ Morocco is a rule-oriented culture <u>Individualism</u> (with a score of 46) ✓ Morocco is a collectivist culture <u>Masculinity</u> (with a score of 53) ✓ Morocco is a masculine culture <u>Long-Term Orientation</u> (with a score of 14) ✓ Morocco is a normative culture <u>Indulgence</u> (with a score of 25) ✓ Morocco is a restraint culture <u>Findings:</u> According to Hofstede (2010), Morocco is hierarchical, rule-oriented, collectivist, masculine, normative, and restraint culture.	<u>Morocco is characterized by:</u> <u>large power distance:</u> ✓ Prevalent Autocratic leadership ✓ Centralized power and authority ✓ Paternalistic management ✓ Hierarchical structure ✓ Recognition of leadership privileges. ✓ Tolerance of power discrepancies and inequalities. ✓ High formality between leaders and subordinates <u>Strong uncertainty avoidance</u> ✓ Subordinates have to adhere to heavy Organizational/societal standards, rules, and structures. ✓ Obeisance of authority and ranking. <u>Collectivistic culture</u> ✓ Priority to in-groups (friends and family). ✓ Emphasis on hierarchy within group/organization/society. ✓ The imposed norms of the group regulate the behavior of the individual. ✓ Paternalistic-considerate leadership. <u>Masculine cultures</u> ✓ Men are assertive and in charge with much focus on performance and success; therefore, most leaders are men. <u>Long-Term Orientation</u> ✓ Veneration of tradition and stability. <u>Indulgence</u> ✓ Strict social norms and regulations to restrain gratification. <u>Findings:</u> According to Hofstede, Moroccan leadership is hierarchical, autocratic, procedural, collectivistic, masculine, normative, and restraint.

*Table 5: Summary of culture and Leadership in Morroco
Based on GLOBE's (2004) Empirical Findings*

<u>Culture in Morocco According to GLOBE Study</u>	<u>Leadership in Morocco According to GLOBE Study</u>
<u>Nine Cultural Dimensions</u> <u>Uncertainty Avoidance</u> (with a score of 3.65) ✓ Morocco scores high at this dimension, which means that people must abide by the tough code of behavior and structure of society. <u>Future Orientation</u> (with a score of 3.26) ✓ Lack of projecting or planning for the future. <u>Power Distance</u> (with a score of 5.8) ✓ Confirmation of Hofstede's outcome concerning the hierarchical nature of Morocco as it scores the highest among the 61 cultures on this dimension. ✓ High social distance characterizes leadership-followership relations. ✓ People are tolerant of inequalities. <u>Institutional Collectivism</u> (with a score of 3.87) ✓ This culture does a little to motivate the "collective distribution of resources and collective action." ✓ Individuals have their own goals and are independent of society/organization. <u>Humane Orientation</u> (with a score of 4.19) ✓ This score shows that Moroccan culture makes an insufficient effort to motivate individuals to display their feelings, generosity, care, friendliness, etc. <u>Performance Orientation</u> (with a score of 3.99) ✓ Societal and family ties are more valued than excellence and performance. ✓ Places high premium on the person than their performance. <u>In-Group Collectivism</u> (with a score of 5.87) ✓ Morocco is a collectivistic society where family and In-group (closely-knit teams/clans) are of great value to individual members. <u>Gender Egalitarianism</u> (with a score of 2.84) ✓ Morocco is a masculine culture. <u>Assertiveness</u> (with a score of 4.52) Aggressiveness, confrontation, competition, controlling the environment, and progress are the primary characteristics of this culture.	<u>Six Leadership Styles</u> <u>Participative Style</u> (with a score of 5.32) ✓ This style is an essential addition and an indispensable prerequisite for effective leadership in Morocco. <u>Team- Oriented Style</u>(with a score of 5.15) ✓ This style is very influential and conducive to effective leadership in Morocco. <u>Charismatic/Value-Based Style</u>(with a score of 4.81) ✓ This attribute contributes relatively to the perception of effective leadership in Morocco. Yet, it does not shape the leadership profile as compared to other countries. <u>Humane-Oriented Style</u> (with a score of 4.10) ✓ It has a little significance and contribution to outstanding leadership in Morocco. <u>Autonomous Style</u> (with a score of 3.34) ✓ It constitutes an impediment to effective leadership in Morocco. <u>Self-Protective Style</u> (with a score of 3.26) ✓ It is perceived to be an impediment, and therefore, has a limited contribution to effective leadership. <u>Findings:</u> According to GLOBE, Moroccans perceive an effective leadership profile as Participative and Team- Oriented. They regard Charismatic and Humane- Oriented as positive attributes that contribute to the construction of an outstanding portrait of leadership. On the downside, they consider Autonomous and Self-Protective as real impediments to effective leadership.

whereas women are rarely if ever appointed in leadership positions. This establishes Morocco as a male-dominant culture. Kabasakal et al.'s (2012) reconsideration of GLOBE's outcomes regarding the societal values "what should be" of the MENA region reveals the overwhelming inclination towards more Egalitarianism in all participating countries.

The same holds true for Morocco, whose low score on power distance (3.11) denotes a noteworthy predilection for Gender Egalitarianism. (Kabasakal et al., 2012, p. 524). This also applies to the societal values, which display high scores. Therefore, Morocco aspires for more future orientation (5.85); more performance inclination (5.76); more collectivism (both institutional = 5.0, 5.68); and more humane orientation (5.51). Parallel to these preferences, Morocco seeks to achieve lower power distance (3.11) and lesser assertiveness (3.44).

The third column of the Table 5 illustrates the discrepancies between the societal practices and values in the Mena region. The scores attached to the minus sign refer to the inferior average of the societal practices in comparison with the societal values (Kabasakal et al., 2012, p. 525). Concerning Morocco, the scores of power distance at both levels practices (5.80), values (3.11) coincide primarily with the scores attributed to the overall MENA region, which are the highest scored societal practices, and the lowest scored societal values. Therefore, 2.69 reflect Morocco's aspiration to decrease the current degree of power distance. What is more, the discrepancies in the cultural practices and values in Morocco indicate a strong urge towards future orientation (-2.59) and performance orientation (-1.77). The high scores of In-group collectivism at both levels of the societal practices (5.87) and societal values (5.87) draw a clear picture of the harmonious tendencies in the current practices and future preferences towards more united families and organizations.

Morocco does constitute a sub-cluster that is worth studying and analyzing separately from the Middle East cluster. Therefore, as illustrated in the Table 5, Participative leaders are the most valued by Moroccan raters, followed by other essential qualities, namely "Administratively competent, diplomatic, performance-oriented, inspirational, and integrity" (Kabasakal et al., 2012, p. 527). On the downside, Moroccan respondents have considered many features as having a negative effect on leadership particularly, Autonomous, Autocratic, Face-saver, Self-centered, Malevolent, Humane, Procedural, conflict inducer, and Status Conscious (Kabasakal et al., 2012).

4 Conceptual Framework and Hypotheses for the Effect of Leadership Style on Organizational Performance:

Part of this research seeks to investigate the effects of leadership styles on organizational performance. Therefore, the conceptual framework underlying this chapter is formulated based

on Bass & Avolio's (1995) MLQ 5X model. The proposed hypotheses reflect the different influences that the three primary styles of transformational, transactional, and Laissez-faire exert on the performance of Moroccan public universities.

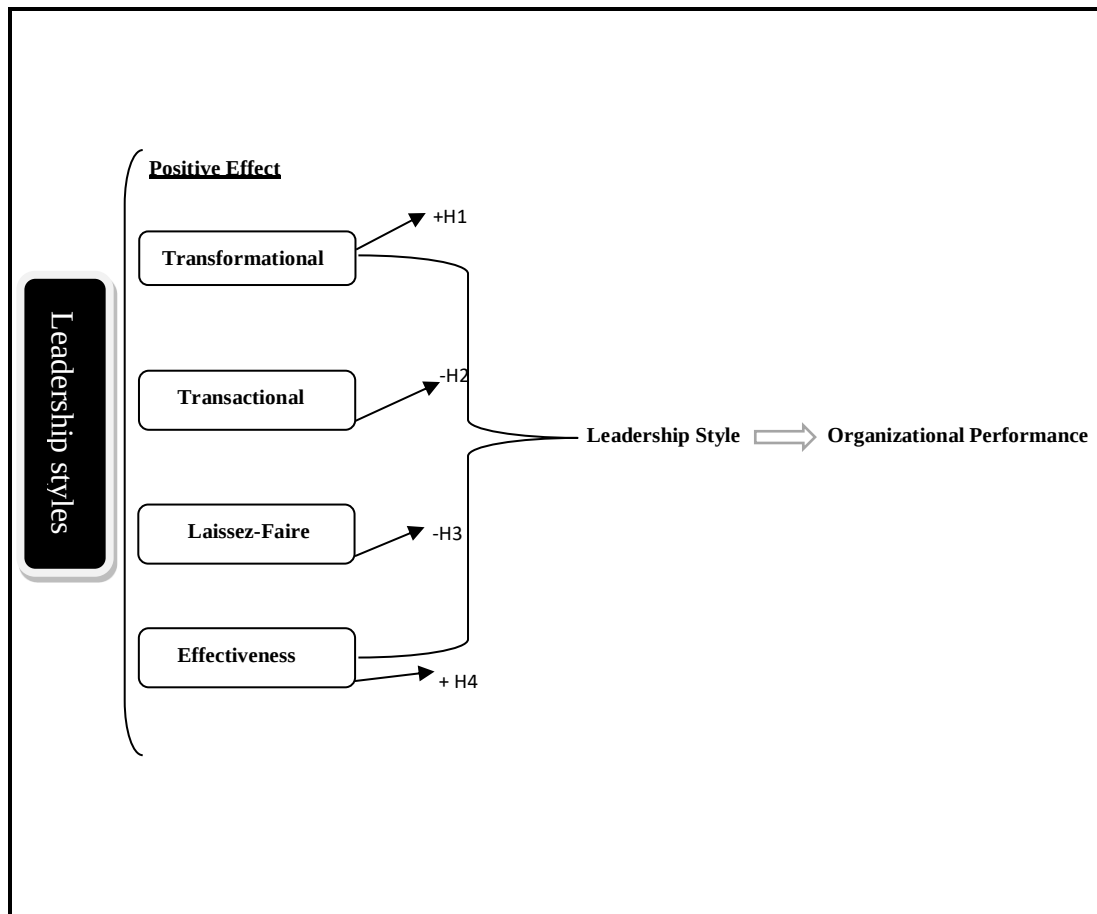


Figure 2: Conceptual model underlying the correlation between leadership styles and organizational/ employees' performance

5 Leadership Styles and Organizational Performance:

5.1 Transformational Style

The current hypothesis derives its strength from the extensive body of the literature that links the transformational style with high performance and employees' satisfaction (Avolio & Bass, 2002). Indeed, many scholars have articulated the crucial role of the transformational leaders who involve their subordinates in the process of decision-making and goals execution, induce them to think out of the box, and encourage them to innovate as they strive to solve daily problems (Avolio, 1999; Bass & Avolio, 1994).

Managers who are adept at establishing the organization and creating strong networks among its employees are more likely to succeed in affecting performance (Macpherson & Holt, 2007). Also, Avolio (1999) associates the upgrade of organizational performance as well as the continuity of competitive advantage with the existence of effective management.

Bass (1985) advocates the role that transformational leaders play as they focus on individualized consideration, intellectual stimulation, idealized influence, and inspirational motivation to trigger the subordinates' admiration and trust. In a similar vein, Butler & Cantrell (1997) establish an immediate association between initiating structure and consideration and job satisfaction and performance. Riaz & Haider (2010) bring to light the explicit correlation between transformational leadership, organizational success, and employees' contentment with their jobs and management. Hoy & Miskel (2008) consider that the whole package of leadership behaviour (idealized influence, individualized consideration, inspirational motivation, intellectual stimulation) contributes to the organizational setting, which leads to superior performance.

Accordingly, the deans that are characterized by transformational features are supposed to have inspiring visions that the administrative and educational staff would embrace and work towards implementing them. This assumption, without a doubt, would foster their sense of belonging and create a general desire to work with this type of university managers. The strength of any leadership is embodied in its ability to trigger maximum excitement and energy from the subordinates and induce them to embrace its vision and goals for the ultimate objective of achieving high performance. On that account, Bass et al., (2000) highlights the role that leaders should play in motivating and prompting their subordinates to realize the organizational goals. An effective leader aims at altering the status quo (particularly for newly appointed deans who strive to change the prevailing situation into a motivating work environment) and directing the personnel and the environment into the path of excellence and success. An efficient leader leads employees through a change process in which they become more motivated and more willing to perform according to high standards and high quality. This means that a transformational leader entices followers to adopt their vision without any coercive strategies or abuse of power. In this line, Seem (2002) considers that the style adopted by supervisors in administrations do have a considerable impact on the performance of the organization. Howell & Avolio (1993) associates transformational managers with the positive prediction of performance, and Bass et al., (2003) confirm the direct liaison between the prediction of performance and transformational leadership. One more testimony in favour of the great impact that transformational leadership can have on performance is the one that Morrow (1983) advances as he considers that this category of leaders boosts the abilities of their subordinates, enhance their self-sufficiency, and delegate tasks to engage them into the organizational value. This shall prompt them to excel and make every effort to achieve their best performance.

5.2 Transactional Style

The most considerable empirical evidence is in favour of the positive impact of the transformational leadership on organizational performance in comparison with the transactional style (Burns, 1978; Bass, 1990; Howell & Avolio, 1993). Similarly, Bass (1985) suggests that transformational leaders are more efficient than transactional leaders. Day & Antonakis (2012), who argue that the transactional style falls behind the transformational leadership as far as organizational performance is concerned, advances the same conclusions. The transformational paradigm is positively linked with organizational performance in contrast with the transactional and laissez-faire paradigms, which have an inferior correlation with performance (Rejas, Ponce, Almonte & Ponce, 2006).

According to Antonakis et al., (2003), one of the most obvious negative sides of the transactional leadership is embodied in the management-by-exception (passive and active). They claim that this management type adopts an expectant behaviour of the task accomplishment and takes measures against employees for their inability to meet their high-performance expectations. Burns (1978) refers to the reward basis with which the transactional leadership motivates team members, thus linking performance to expectation and reward while overlooking inspirational and cooperative actions. Furthermore, Bass (1985) elaborates that management-by-exception and reward are the drives of transactional leadership. This consolidates the corrective actions against subordinates in the case of the non-achievement of the goals. The objective of a leader who adopts a management-by-exception is to obtain the maximum profitability at the lowest possible price paid. This is achieved through inciting employees to take charge of the different duties they are assigned and assume full responsibilities of their actions in return for promised rewards that can be monetary incentives (bonuses, raises), promotion, or any other type of financial remuneration. However, this has limited and short term influence on subordinates. Contingent reward means that the promised premium or compensation depends mainly on the level of performance and productivity, as well as the accomplishment of tasks. In this sense, the financial or promotional recompenses are conceived as stimulative premises that urge employees to make every effort to get the job done. Meanwhile, this also means that productivity and engagement are contingent upon the existence of financial incentives. In a similar vein, Boehnke et al. (2003) make it clear that the attention of transactional leaders is primarily on the task as they expect its completion in lieu of giving importance to the organization as a whole. This excessive task-oriented style is perceived as a defect when other variables such as inspiration and collaboration are in play.

5.3 Laissez-Faire Style

This third type of leader is undoubtedly associated with the underperformance in the organizations managed by laissez-faire or non-transactional leaders. Surprisingly, laissez-faire leadership does not pay attention to the personnel or the productivity of the organization, as clearly stated by Puni et al. (2014) “the main emphasis of this leadership style is neither on performance nor people” (p. 179). Bass & Avolio (1997) label this sort of behaviour on the part of leaders “avoidance of leadership” thus, referring to the leader’s unwillingness to make decisions and the inability to provide incentives to engage and motivate subordinates or meet their individual needs. Similarly, Deluga (1992) confirms the subordinates’ lack of satisfaction with their non-transactional leadership and inferior productivity due to the underperformance of the organization. Moreover, Dubinsky et al., (1995) maintain that with such type of leaders, employees are left on their own, especially in the time of crisis. Therefore, they are obliged to improvise they make decisions or overcome problems. However, this management style does have good relationships with everyone in the organization as it strives to consolidate these bonds by avoiding any control mechanisms and by giving employees the total freedom to make decisions. From the above criticism, this paper deduces the assumption that the organizations managed by non-transactional leaders will underperform. Yet, despite the previously listed negatives, it also posits that a limited proportion of employees would prefer working with this type of leadership since they enjoy the lack of control and supervision and complete freedom to take initiatives and decisions.

6 Leadership Research Hypotheses :

- The **transformational** practice will lead to a **positive** perception of **leadership style**, which affects employees’ performance favourably.
- The **transactional** practice will lead to a **negative** perception of **leadership style**, which affects employees’ performance unfavourably.
- **Non-Transactional leadership (laissez-faire)** practice will lead to a negative perception of **leadership style**, which affects employees’ performance unfavourably.
- **Effectiveness** will lead to a **positive** perception of **leadership style**, which affects employees’ performance favourably.
- The adoption of adequate **leadership style** will lead to **higher job satisfaction** among employees.
- The adoption of adequate **leadership style** will lead to a **higher commitment** of the employees to their organization.

7 Section Summary

This section tracks down the ongoing evolution of leadership paradigms over the preceding of 50 or 60 years of theory development. The thorough investigation of the relevant literature shows the overwhelming tendency of the research to shift from acknowledging the natural and hereditary attributes as the only factors that distinguish individual leaders from ordinary people (trait theory). The subsequent shifts are the recognition of the leaders' behaviours as determinants of leadership effectiveness (behaviour theory) to highlighting the role of contextual or situational factors that enable leaders to adopt flexible qualities and behaviours in the various circumstances in which they exercise their leadership. Meanwhile, leadership theory has never ceased from widening its horizons and probing current issues related to leadership-followership correlations and the influence of organizational culture on leadership styles (new leadership theories). In this context, Moroccan patterns of leadership and culture are accounted for from two international studies. The GLOBE study and Hofstede's model are particularly significant to this paper as they provide a valid and credible basis to shed light on the type of leadership and the nature of organizational culture prevailing in the kingdom. According to Hofstede (2010), Morocco is hierarchical, rule-oriented, collectivist, masculine, normative, and restraint culture. Hofstede's outcomes delineate Moroccan leadership as hierarchical, autocratic, procedural, collectivistic, masculine, normative, and restraint.

GLOBE's findings demonstrate that Morocco possesses low Future Orientation and Institutional Collectivism, whereas it scores high on Power Distance and In-group Collectivism. Other societal practices are ranked in a medium position, namely Humane Orientation and Assertiveness. It scores low on Performance Orientation, Uncertainty Avoidance, and Future Orientation. According to GLOBE, Moroccans perceive an efficient pattern of leadership as being Participative, and Team Oriented. They also regard charismatic and Humane-Oriented as positive attributes that contribute to the development of an outstanding portrait of leadership. On the downside, the findings categorize Autonomous and Self-Protective as serious impediments to effective leadership.

This section ends up by providing the conceptual framework based on Bass & Avolio's (1995) MLQ x 5 model, which attributes a positive effect on leadership style to transformational style and effectiveness. In contrast, it associates a negative influence on employees' performance to the transactional and passive-avoidant (*laissez-faire*) styles of leadership. The objective of examining these four hypotheses, other than validating them or not, is to provide answers to the research questions related to the dominant leadership styles and their effect on organizational performance in Moroccan tertiary education.

Section Two: Organizational Culture

Introduction

This section is devoted to reviewing the major schools of thought and to providing a thorough description of the most prominent patterns and models underlying organizational culture. It outlines the abundant theoretical standpoints from which the construct of culture and its bearing on organizations are approached. Therefore, this section builds on the most influential scholars and researchers in the fields of culture and organization to lay down the relevant philosophical and analytical background for this study. The extensive research in organizational theory has produced different approaches and methods that categorize culture. Indeed, researchers have attempted to provide adequate and comprehensive models to describe this construct according to the philosophical foundations they affiliate themselves into. Therefore, seven major typologies appertaining to a variety of schools have provided an adequate ground for the systematic study and assortment of organizational culture:

- ❖ Burrell & Morgan (1979) offer a four-paradigm description of the concept of culture. The four schools are functionalist, interpretive, radical humanist, and radical structuralist.
- ❖ Smircich (1983) identifies two primary criteria in her attempt to relate culture to the organization: the critical variable versus the root metaphor.
- ❖ Allaire & Firsirotu (1984) provide the socio-cultural versus ideational system typology of culture.
- ❖ Meyerson & Martin (1987) describe culture from three analytical perspectives: integration, differentiation, and ambiguity.
- ❖ Schein (1984, 2010) makes use of a three-level model to account for organizational culture. These are artifacts, espoused beliefs and values, and basic underlying assumptions.
- ❖ Cameron & Quinn (2006) formulate the CVF model that categorizes four types of organizational culture: clan culture, adhocracy culture, market culture, and hierarchy culture.
- ❖ Hofstede's (1980, 2010) cross-cultural dimensions.

This section also provides critical reading and analysis of the ontological (subjective versus objective) and epistemological (how social reality is created) differences that underlie these schools of thought along with their implications on organizational culture. Furthermore, Moroccan Culture is closely examined through the empirical lens of the 6-D Model. Hofstede's 6-D paradigm is especially pertinent to the national context and the current research paper. Ultimately, the conceptual framework of this section establishes a link between particular types

of organizational culture and organizational performance in Moroccan higher education based on Cameron and Quinn's (2006) CVF model. Therefore, hypotheses 1, 2, and 3 posit a positive effect of clan, market, and adhocracy cultures on organizational performance, whereas it claims that the hierarchy culture will exert a negative impact on organizational performance H4.

1 Major Organizational Culture Schools of Thought:

1.1 The Critical Variable versus the Root Metaphor

Smircich (1983) holds that the concepts related to culture and organization can be analyzed from five 'thematic' areas depending on the research inclination: comparative management, corporate culture, organizational cognition, organizational symbolism, and unconscious processes and organizations. She determines two major criteria in her endeavour to categorize these research agendas. Therefore, she states that the critical variable criterion entails the first two areas (comparative management and corporate culture). In contrast, the root metaphor standard encompasses the last two (organizational cognition, organizational symbolism, and unconscious processes and organizations). She further argues that the notion of 'organization' has been seen from different metaphorical perspectives according to the assumptions made about it. Thus, referring to organizations as machines, organisms, and theatres falls within the general analogy that facilitates the comprehension of its intricate nature.

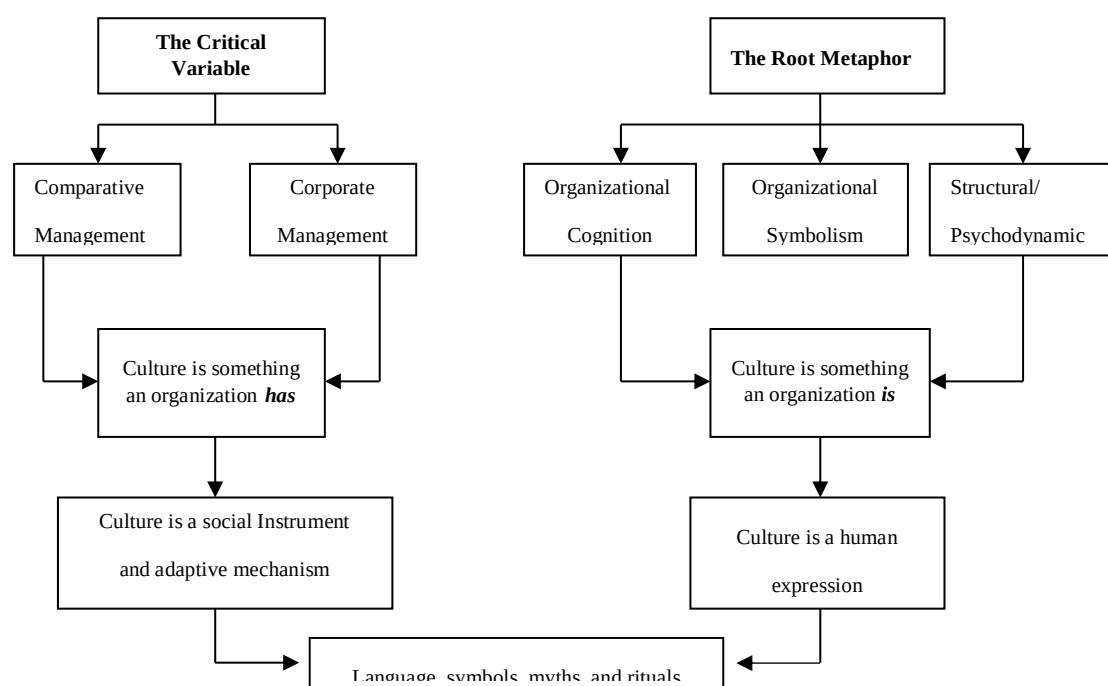


Figure 3: Organizational Culture Paradigms: The Critical Variable versus the Root Metaphor Adapted from Smircich (1983)

1.1.1 The Critical Variable Criterion

Smircich (1983) advances the view that comparative management seeks to find similarities and differences by comparing cultures and providing suggestions to achieve organizational effectiveness. She also maintains that the corporate culture criterion considers organizations as social instruments that produce cultures in addition to goods and services. She accentuates the role of culture as “social or normative glue that holds an organization together” (Smircich, 1983, p.344). Moreover, the view of culture as something that an organization *has* is congruent with the functionalist doctrine. Both approaches build their insight of culture as an organism or ‘printing force’ and as a social world that “expresses itself in terms of general contingent relationships among its more stable and clear-cut elements, referred to as “variables” (Smircich, 1983 p.347). Culture, in this view, is a human enactment. The ultimate purpose of these two approaches is to investigate organizational management and control.

1.1.2 The Root Metaphor Criterion

Smircich (1983) maintains that on the contrary to the previously described view, the root metaphor approach to culture considers it as something an organization *is*. This represents a new way of relating culture to other social aspects and accounts for the mysterious nature of this construct. The expressive ideational and symbolic perspective perceives organizations as expressions of human consciousness. The epistemological bases of this perspective are deeply rooted in anthropology and, therefore, can be analyzed from the cognitive anthropology, symbolic anthropology, and structural anthropology. Smircich (1983) concludes that the perspectives that frame the study of organizational culture (cognitive, symbolic, structural, and psychodynamic) examine culture from different points of interest and programs. The root metaphor perspective considers it as a human expression. This standpoint is entirely different from the view, which treats it as an instrument and adaptive mechanism. It also assumes that “the social and organizational world exists only as a pattern of symbolic relationships and meanings sustained through the continued processes of human interaction” (Smircich, 1983, p.353). This abstract depiction of the social world interprets the social action in terms of the meanings and experiences that look like a rule to an observer. Both the root metaphor and the critical variable give priority to language, symbols, myths, stories, and rituals in their investigation of culture. They are accounted for as generative processes rather than cultural artifacts. The main objective of this approach is to decipher the way organizations are formed and the meaning of being organized (Smircich, 1983, p.353).

1.2 Cognitive Approach

Smircich (1983) holds that the branch of cognitive anthropology, referred to as ethnoscience, considers culture as a system of cognitions produced by the human mind. This perspective also postulates that anthropologists have to uncover the rules or the unconscious logic created by the mind to figure out the way the members of a culture see and describe their world. Her quotation of Harris and Cronen (1979), which equates culture to the organization and depicts an organization, as 'master contract,' entailing the self-image of the organization, is an effective way to analyze and appraise organizations. Similarly, Argyris and Schon (1978) develop a notion of culture as 'cognitive enterprise.' The objective of this study of organizations is to reveal the 'theories-in-use' that guide the behaviour of their members.

Smircich also maintains that other theorists such as Litterer and Young (1981) regard culture as ideational systems that involve the entrepreneurial patterns, the scientific patterns, and the humanistic patterns. They serve the managers well in developing reflective skills to change paradigms. The cognitive assumption that depicts organizations as 'cognitive enterprise' is a clear focus on thought and mind.

1.3 Structural/ Psychodynamic Approach

Smircich (1983) highlights the structural view of Lévi-Strauss and the psychodynamic approaches to culture as the expression of unconscious psychological processes. This approach describes how the unconscious processes are projected in the forms and practices of organizations and how they are conducive to conscious manifestations. Levi-Strauss's assumption posits that culture reflects the 'unconscious infrastructure' and the universal features of the human mind. Smircich (1983 p.352) considers that if this approach is implemented as the basis for the study of organizations, two major questions would be asked: What problems are solved by such persistent patterns in the organizational arrangement as the hierarchy? What do the patterns of organization reveal about the human mind? Smircich (1983) lists the works of some researchers (Turner, Mitroff, McSwain and White, Gemmill, and Walter) to substantiate the claims of this perspective, which attempts to fuse the conscious and unconscious processes.

1.4 Symbolic Approach

Smircich (1983) refers to the contributions of Hallowell (1955) and Geertz (1973) regarding culture as a system of shared symbols and meanings. They relate organizational activities to the systems of meaning underlying them. Therefore, Smircich (1983) argues that whenever this symbolic approach is applied to organizational analysis, organization and culture

are perceived as ‘pattern of symbolic discourse.’ She further contends that the understanding and interpretation of organizations require an exploration of the symbol systems and their implications to find out how experience becomes meaningful for the members. She also reiterates the role of researchers in identifying the themes embodied in symbolic discourse and the association between values, beliefs, and action, hence the paramount importance of these themes in the symbolic analysis of the organization. She states that the work of Van Maanen (1973) is especially interested in studying people’s appropriate behaviour based on their understanding of their organizations. In this respect, the focus is on how people’s actions are related to their interpretation of experiences in their organizations. Therefore, this will allow figuring out the processes, which enable people to build common interpretations and meanings of experience to achieve consistent behaviour. This induces symbolic theorists to focus on leaders as the main responsible for creating a sense of organization and shared interpretations among their organizations. From this perspective, the role of the leader is to manage meaning and shape interpretations.

1.5 Socio-cultural versus Ideational System

Allaire and Firsirotu (1984) consider further this division (based on Keesing’s 1974 work) between the theories that conceive culture as an integrated socio-cultural system and those, which conceptualize it as a ‘system of ideas’ or ideational system.

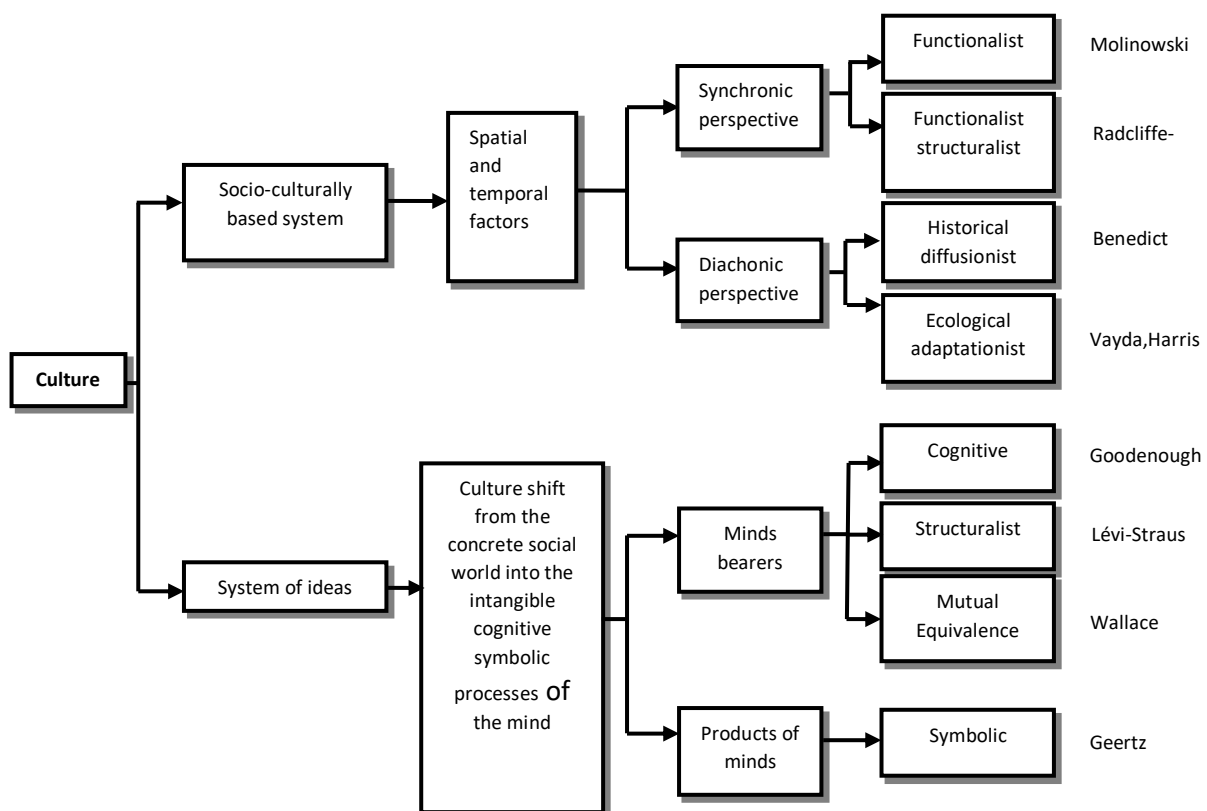


Figure 4: Socio-cultural versus Ideational System Adapted from Allaire & Firsirotu (1984)

Keessing (1974) inspects cultural anthropology for a thorough study and categorization of schools of thought on culture and their connectedness with organizations. The assortment of the various theoretical underpinnings underlying culture leads him to develop a typology that describes and groups the intricate concepts related to this construct according to two pivotal streams of research: socio-cultural and ideational systems.

1.5.1 Socio-culturally based theories

Allaire and Firsirotu (1984) maintain that the crucial distinction between the four perspectives appertaining to the socio-cultural systems is chiefly based on the spatial and temporal factors which frame the investigation of an organization at a given time and location. Therefore, while the functional and structural-functionalist theories look at the culture at precise time and space as part of the '*synchronic*' perspective, the historical-diffusionist and the ecological-adaptionist affiliated with the '*diachronic*' perspective cover the time and delve into the internal stages of the target culture to figure out its progression.

1.5.1.1 The synchronic perspective

The functional orientation suggests that organizational structures, work processes, and internal policies should be consistent with the need requirements of the participants. Culture, in this respect, is regarded as an instrumental apparatus that serves the members in their pursuit of need satisfaction. However, in the opposite case, the whole system may come to a grinding halt if the organizational structures do not take into account the basic needs of the individual members.

The structural-functionalist perspective perceives organizations as systems, which cannot interplay with the surrounding environment in default of well-set goals and purposes. Consequently, organizations have resembling cultures like those of the social systems in which they function. In this general line of functional interaction, it is argued that the value system of an organization should not contradict those of the society in which it operates. On this important detail, embracing the same set of values serves to legitimize the organization's goals and activities. Meanwhile, another perspective states that owing to their past leadership and history, organizations can have their distinct values.

1.5.1.2 The diachronic perspective

According to Allaire and Firsirotu (1984), the ecological-adaptionist school regards culture as socially transmitted behaviour patterns, which allow human communities to

accommodate with their environment. The adaptive nature of organizations, as socio-cultural systems, enables them to cope with the social and political surroundings. The contingency theory and the ecological theory are aligned with this perspective. They assert that organizations can affect their environment and can be affected by societal culture, as has been clearly illustrated by cross-cultural studies. In a contrasting vein (with the structural-functionalist), Child (1981) argues that Organizations can possess very distinct values and meaning systems from those of the surrounding society if other contingency factors have a more considerable influence than the one inflicted by the society. This draws a clear distinction between this conception and its structural-functionalist counterpart. Therefore, while the latter gives credit to the social components for reshaping organizational culture, the ecological-adaptionist perspective emphasizes that organizations can be shaped by different sources in addition to the values of society. What is more, although this perspective reiterates that the organizational culture should eventually mirror the underlying social structure in which it exists, it does not deny the right of organizations to acquire their subcultures.

The Historical Diffusionist School, as reported by Allaire and Firsirotu (1984), contends that cultural change is the result of an evolutionary process that takes place according to some historical circumstances rather than some adaptation abilities. This change is the direct result of acculturation and diffusion processes. The lack of a straightforward equivalent in the studies entailing organization do not hinder many researchers such as Chandler, Stinchcombe, Filly, and House from examining organizations from a historical perspective. Their works shed light on the beginning and development of these systems by scrutinizing their structures, forms, and processes. Meanwhile, Stinchcombe (1965) is especially persistent on the notions of time, place and circumstances of organization's birth as the generating factors of culture instead of the functional or adaptive elements; hence, how the divergence of the values of organizations from those of the society, accounts for their historical roots and particularities.

1.5.2 Ideationalism: cultures as systems of ideas

Allaire and Firsirotu (1984) investigate the functional cognitive perspective while adopting Goodenough and Levi Strauss's perception of culture as the deep and unconscious structure of the mind. Geertz's (1973) conception of culture as a set of control mechanisms that manipulate and govern human behaviour is an overt critique of the prevailing socio-cultural conviction that considers culture as a set of concrete behaviour patterns reflecting our habits, traditions, and customs. This significant shift of the conceptual bearing of culture from the physical world into the intangible cognitive symbolic processes of the mind has entailed many critical interrogations about organizations as socio-cultural systems. It calls into question the

role of organizations in fostering cultures that are considered as different from society. Furthermore, it questions the effect of the internal and external environments on the structure of an organization. Ultimately, it claims that the maladjustment of these systems can have severe repercussions on the organization to the point of internal revolution or collapse.

Allaire and Firsirotu's (1984) argument agrees with Keesing's (1974) typology. He delineates three approaches that regard cultures as systems of ideas. His reference to cultures as cognitive, structural, and symbolic systems structures the ideational framework.

1.5.2.1 The Cognitive School

Keesing (1974) makes it clear that the development of cognitive anthropology, which considers culture as cognition or a system of knowledge, holds a contrary standpoint from the adaptationist perspective that belongs to the socio-cultural school. It conceptualizes cultures as socially transmitted behaviour patterns that serve as a frame of reference through which the behaviours of the individuals are regulated. He attributes the cultural change to the natural adaptive process, which is innate in human beings. However, despite Keesing's furtherance to the ideational line of argumentation, he recognizes its inevitable intersection with the socio-cultural stream: "The ideational components of cultural systems may have adaptive consequences-" (Keesing, 1974 p, 76). In this vein, Allaire and Firsirotu (1984) advocate the cognitive tradition, which perceives culture as mental processes, perceptions, or cognitions that can be arranged in a system of knowledge, and therefore, acquired by individuals to behave in agreement with the society's adequate norms of conduct. In this respect, the concept of culture intersects with two primary conceptualizations of the cognitive school: organizational climate and organizational learning. Organizational climate refers to the cognitive map resulted from the interaction of individuals with the organization, thus enabling them to comply with their organization's demands. On the other hand, organizational learning claims that organizations can be endowed with cognitive processes. This perspective affirms that organizations possess the minds and, therefore, can develop mental processes and memories. Moreover, Allaire and Firsirotu (1984) emphasize the notions of 'shared cognitive maps' and 'collective mind' as the products of the whole organization, not only of individuals.

1.5.2.2 The Structuralist school

Allaire and Firsirotu (1984) dig into the unconscious mental processes, which can be understood through the concrete representations of cultural products and artifacts. They maintain that Lévi-Strauss, who has been keen on his quest for the universal structures and

processes that characterize the human mind, is particularly affected by Rousseau and his obsession with 'the savage mind,' structural linguistics, and Durkheimian sociology. Keesing (1974) differentiates between culture and nature and refers to Levi-Strauss's structuralist view of culture as shared symbolic systems that are produced by the human mind.

1.5.2.3 The Mutual Equivalence School

Allaire and Firsirotu (1984) recognize that this school's account of culture is a far cry from the previously analyzed perspectives. According to the mutual equivalence school, the distinction lies in the standardization of the cognitive process among human beings to the extent of being able to predict each other's behaviour. Nonetheless, this predictive aptitude provides humans with the prospect to cooperate and contribute to different social activities in spite of the lack of shared goals and beliefs. Allaire and Firsirotu (1984 p.205) also recognize that Weick's (1979) correlation between Allport's (1962) composite structures and those of the mutual equivalence breaks new ground in the field of organizational culture. Organizations are perceived as platforms for the participants to realize their various needs. Thus, the degree of involvement and commitment to the formation of collective structures will largely depend on one's interest in these structures. In all, the understanding of organizational culture requires the study and analysis of individual cognitions along with the framework of the mutual prediction of behaviour.

1.5.2.4 The Symbolic School

Allaire and Firsirotu (1984) hold that this perspective conceives culture as the production of the mind and shared meaning systems. Some major trends in sociology and philosophy have dominated the development of this stream of research. In this regard, three distinct schools have made up the fundamental theoretical structure of this school. The first school of thought is the institutional perspective; it highlights history as the main factor contributing to the creation of values. The second perspective is the actionalist school, which underlies past leadership as a fundamental constituent in the establishment of the organization's culture. Symbolic interactionism is the last perspective that posits that organizations entail and create the life and reality of their participants so that "they have no external reality but are merely social creations and constructs..." (Allaire and Firsirotu, 1984, p208). Additionally, the interpretive paradigm denies the existence of any organization, and the ethnomethodological perspective scrutinizes the methods by which different actors relate to the manifestations and events taking place in their organizations.

Keesing (1974) singles out symbolism as the third perspective belonging to the ideational school. He ascribes its development to the American anthropologists Clifford Geertz and David Schneider. Geertz sees culture as shared codes of meaning, which are interpreted in real contexts and manifested through symbolic actions. In the meantime, Schneider regards culture as a system of symbols and meanings involving ‘units’ and ‘rules’ that characterize relationships and behaviours. He contrasts between the ‘normative’ and ‘cultural’ systems of culture. On the one hand, he argues that the normative system reflects the norms and directions that different social actors should adhere to in order to perform their roles. On the other hand, the cultural level refers to the social setting where different actors interact and carry out their functions. Finally, he proposes an eclectic approach to study culture from cultural, psychological, and social angles for a thorough comprehension of people’s social lives.

1.5.3 Burrell & Morgan’s Four-paradigm Matrix:

Burrell and Morgan (1979) introduce a four-paradigm matrix in their exploration of social theory and organizational theory. Their typology comprises four schools of thought: functionalist, interpretive, radical humanist, and radical structuralist. The outcomes reflect a comprehensive scheme that sorts out these theoretical underpinnings according to subjective-objective criteria of categorization.

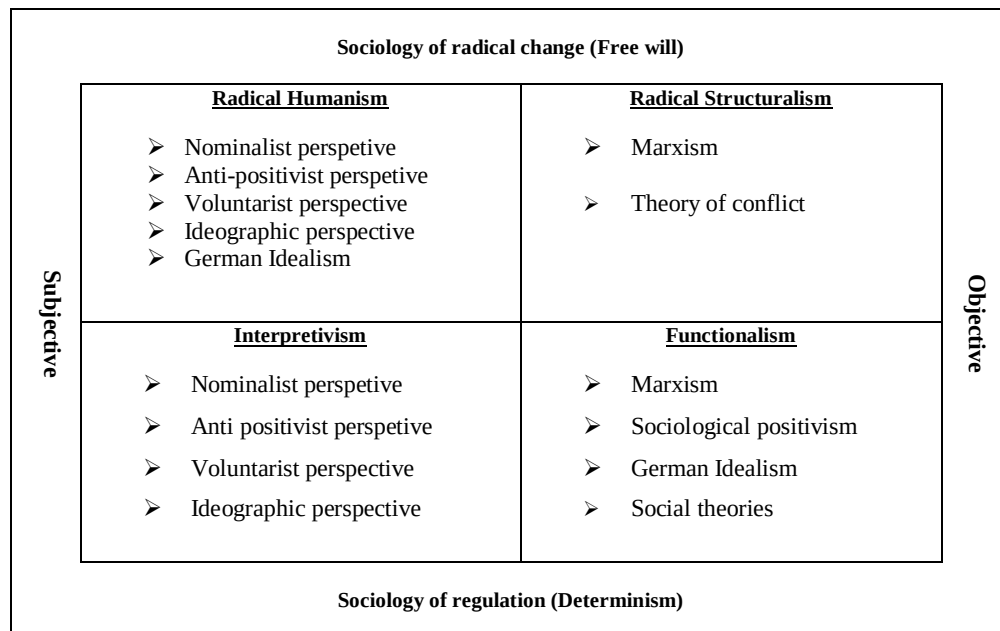


Figure 5: The four paradigms and various ontologies. Adapted from Burrell & Morgan (1979)

1.5.3.1 Functionalism:

Burrell and Morgan (1979) emphasize the functionalist paradigm as the predominant framework for studying organizations. This perspective produces regulations on social affairs. They maintain that the rise of functionalism in France in the early nineteenth century has been influenced by several social theorists, such as Auguste Conte, Herbert, Spencer, Emile Durkheim, and Vilfredo Pareto. According to Burrell and Morgan (1979), the functionalist tradition claims that the social world consists of concrete empirical artifacts and relationships that can be explored from natural sciences approaches. For this reason, the functionalist paradigms prefer mechanical and biological comparisons to understand the social world. Nonetheless, Burrell and Morgan (1979) recognize the influence exercised by the German idealist tradition of social thought on functionalism in the early decades of the twentieth century. That opposing stream of thought has refuted the mechanical and biological metaphors to the social world and has supported the role of the social actors in understanding society. They attribute the integration of the components of the idealistic approach into the social theories to Max Weber, George Simmel, and George Herbert Mead. Furthermore, the Marxist impact in the 1940s has integrated the sociology of radical change in the functionalist perspective to deny the argument that functionalism is a conservative paradigm which is unable to account for the social change. Burrell and Morgan (1979) contend that sociological positivism has had an enormous influence on functionalism. Ultimately, they state that the works of many organizational theorists, industrial sociologists, psychologists, and industrial relation theorists fall within the functionalist paradigm.

1.5.3.2 Interpretivism:

Burrell and Morgan (1979) argue that the interpretive paradigm adopts a subjective method of description to the social world. They also contend that this paradigm seeks to delve into the consciousness and the frame of mind of the individual members to uncover the significance of the social life. Burrell and Morgan (1979) contend that this paradigm explores social science from the 'nominalist, anti-positivist, voluntarist, and ideographic' perspectives. The philosophers and sociologists who are affiliated with this tradition work to overcome the essence of social reality. Burrell and Morgan (1979) maintain that interpretivism is a development of the idealist tradition of social thought. They add that the works of Kant have provided the ground for this paradigm, while theorists such as Dilthey, Weber, Husserl, and Schutz have fostered this tradition as a framework for social analysis. Burrell and Morgan (1979) highlight the significance of this paradigm to study organizations.

1.5.3.3 Radical Humanism:

Burrell and Morgan (1979) argue that the radical humanist paradigm shares a similar subjective approach in its development of 'sociology of radical change' as the interpretive model, and therefore, explores the social world from the same 'nominalist, anti-positivist, voluntarist, and ideographic' perspectives. Meanwhile, the line of divergence lies in its emphasis on surmounting the restrictions of the existing social order. The fundamental notion of this view is embodied in the ideological structures, which preclude the true human fulfilment by separating the individual from their pure consciousness. Theorists are preoccupied with releasing individuals from the constraints inflicted by the social order, while they analyze the 'status quo' critically due to its anti-human view of society and its prevention of people from achieving their full potential. This paradigm stresses 'radical change, modes of domination, emancipation, deprivation, and potentiality.' Burrell and Morgan (1979) identify the intellectual underpinnings of the radical humanist paradigm with the German idealist tradition (in the same way that the interpretive paradigm has been associated with this tradition) developed by Kant and Hegel. The ascription of the first utilization of this paradigm as radical social philosophy to Marx does not overlook the works of many other radical humanists such as Lukes and Gramsci, Habermas and Marcuse, Sartre as well as many social theorists such as Illich, Castaneda, and Laing who have worked on this paradigm.

1.5.3.4 Radical Structuralism

Burrell and Morgan (1979) argue that radical structuralism adopts an objectivist view while supporting the sociology of radical change. They further argue that although it is derived from functionalism, this paradigm's commitment is to "radical change, emancipation, and potentiality, in an analysis which emphasizes structural conflict, modes of domination, contradiction, and deprivation" (Burrell and Morgan 1979 p. 34). In other words, it is a commitment to change in society from a radical humanist perspective. However, there is an apparent distinction between the radical structuralist paradigm and the radical humanist paradigm; while the former stresses on structural relationships to depict the social world, the latter places emphasis upon 'consciousnesses' for a radical analysis of society. Burrell and Morgan (1979) accredit Karl Max for the most significant contribution to this paradigm. It is only afterwards that other theorists such as Engels, Plekhanov, Lenin, Bukharin, Althusser, Poulantzas, Colletti, have followed this perspective. Another substantial contribution to this paradigm is Max Weber's work.

2 Summary and discussion :

This comprehensive overview of the most significant philosophical schools that encompass culture and its extensions to the intricate contexts of organizations has undoubtedly led the researcher across a great few striking epistemological, ontological and human nature discrepancies between these theories. What is intriguing about this review is its depiction of wide-ranging conceptions of the organization from diverse and sometimes conflicting standpoints.

The ontological assumption that makes up the leading debate platform between these theories questions the controversial concept of reality. Is reality given (external from conscious) or a product of the mind? This has been the underlying question that each school of thought has strived to answer. The epistemological debate revolves around the forms of knowledge that humans can reach and whether knowledge is the result of experience or acquisition. The determinist-voluntarist assumption prevails in the discussion on human nature. Whether the environment determines humans, or they create their environment by their “free will” has been subject to different views and arguments.

In this respect, it is worth mentioning Bryman’s (2004) description of ontology as a theory of the nature of social entities. This definition goes hand in hand with the objective of the current section to depict the essence of each paradigm, together with its bearing on organizational settings. On that account, the ontological ground upon which different scholars) assorted these theories is the subjective-objective dualism, which constitutes an adequate basis for the assumptions about the nature of reality (Morgan & Smircich, 1980, p. 492).

Therefore, while the objectivist viewpoint adopts an individual (particularistic) and internal processing to a subject, the subjectivist standpoint emphasizes the intrinsic or external aspects of the object. Approaches belonging to the objectivist perspective explore associations and regularities between the components. They look for universal conceptualizations and laws to explain reality. Subjectivist methods study the way individuals create and interpret the world. In a clear account of the objectivist inclination to the world, Skjervheim (1974) states that the proponents of this perspective: “...treat everything as an object in the world, or as relations between such objects, exclusively” (p, 216). On the other hand, Morgan & Smircich (1980) consider that the core of ontological assumptions on subjectivist approaches to social science is that reality is a projection of human imagination. On the contrary, the objectivist approach to the social world is characterized by an authentic and concrete natural world.

Burrell & Morgan (1979) initiate a remarkable four-paradigm matrix that breaks down the theories’ views of social reality according to the subjective-objective standard of alignment. This assortment suits ideally Smircich’s (1983) subject versus object approach to viewing the

world, as well as Allaire & Firsirotu's (1984) objectivist epistemology of culture. Martin (2002) argues that culture is both an objective and subjective construction. The author contends that culture has both objective and subjective boundaries, both material and ideational features. Ultimately, cultural analysis can be very significant since it can lead to insightful interpretations of organizations, management, and working life.

In her endeavour to answer the question of whether the organization has a culture or it is a culture, Smircich (1983) categorizes the paradigms appertaining to root metaphor, namely the cognitive, symbolic, and structural/ psychodynamic under the subjective conception. This subjective account perceives culture as a process rather than a product or variable. It is an attempt to comprehend how the members of an organization contribute to the creation of culture and how they are affected by culture, (the organization is a culture). The cognitive perspective conceptualizes organizations as mental processes (cognitions) and systems of knowledge or thought that give sense to organizational activities and actions. The symbolic perspective perceives organizations as systems of shared symbols and meanings that underlie members' behaviours according to their understanding of the symbolic discourse prevailing in their organizations. The structural perspective adopts the psychodynamic approach of culture to describe how the unconscious psychological processes are projected in the forms and practices of organizations.

On the other hand, she maintains that the critical variable approach has an objective (internal) view of the variables affecting culture. In this sense, organizations are considered to be generative of culture (the organization has a culture).

Allaire & Firsirotu's (1984) socio-cultural and ideational paradigms give evidence of the dominant objectivist stance in their typology (Morgan & Smircich, 1980). The functional model considers that organizations should be consistent with the need requirements of the participant members. The functional- structuralist perceive organizations as systems that need to have similar cultures to the social network in which they function. The ecological-adaptionist argues that organizations affect their environment and can be affected by societal culture. The cognitive, structural, and symbolic perspectives regard culture as a system of ideas or cognitions. Ultimately, the mutual equivalence school conceptualizes organizations as platforms for the participants to realize their various needs. Allaire and Firsirotu's objectivist orientation concludes that cultural reality is embodied in the organization rather than the individual members.

Burrell & Morgan's innovative contribution is the adoption of regulation-radical as well as objective-subjective criteria to sort out the theoretical paradigms from the sociological perspective. Their account aims at highlighting two polar-opposite groups of social theories:

those articulating stability and regulation as warranties for social order, and those taking for granted economic and political conflicts and contradictions as legitimate pretexts for radical change in society.

Burrell and Morgan's interpretive and radical humanist paradigms hold a subjective analysis under the sociology of regulation. While the first paradigm accounts for stable behaviours from the individual's perspective and tries to figure out how a subjective process creates the world, the radical humanist perspective is concerned with eliminating the social constraints that hinder the right consciousness and potential.

On the other hand, the functionalist and radical structuralist schools fall within the objectivist conception in the sociology of radical change. Functionalist school, in this sense, aims at providing a rational description of human affairs. It articulates the status quo, social order, social integration, and solidarity as guarantees for social stability. This perspective has considerably contributed to the organizational studies. The radical structuralist paradigm takes for granted natural change embodied in societal structures and resulting from political and economic crises in society. This paradigm revolts against any forms of social and structural power that govern organizations and society.

Meanwhile, the analytical reading of Burrell & Morgan's (1979) theories brings forth a crystal-clear distinction concerning the implications of the various paradigms on the organizational context. Therefore, some models have more bearing on organizations than others. In this respect, it can be advanced that the functional and radical structuralist paradigms have provided the most abundant contributions to the field of organization theory, while the interpretive and radical humanist models have emphasized individual actions and identity. It is worth mentioning that the latter paradigm is anti-organizations, and therefore, it is considered to be of less significance to the theory of organization.

The fundamental divergence between the functional and structural-functional paradigms is embodied in the organizational dimensions that each of these schools attempts to consider. Therefore, while the functional perspective identifies patterns of attitudes and beliefs prevailing in organizations, the structural-functionalist view focuses on featuring the correlations between these dimensions and their effect on internal operations and outcomes of organizations. Meanwhile, the point of convergence between these two paradigms lies in their consideration of culture as an organizational variable (culture, in this sense, is distinguished and measured separately from the other two variables, namely organizational performance and leadership) which has immediate linkage and implications on the current study. The interpretive perspective holds a subjective account to depict the social world. It delves into the consciousness and the frame of mind of the individual members to uncover the significance of the social reality. The

radical approaches (humanist and structuralist) delineate the essence of change in society. The humanist paradigm claims that change is a natural process that comes as a response to social constraints. In contrast, the structural perspective argues that change is a product of structural contradictions, domination, and conflicts inherent within society. It should be noted that both the interpretive and radical humanist paradigms are mostly anti-organization in scope to the extent of denying the existence of any organization.

Deetz (1996) criticizes the subjective-objective categorization of research paradigms or the interior (subjective) versus the exterior (objective) alignment of the research sharply. He considers assortments based on these two criteria as “faulty logic” and provides three arguments to support his claim: Firstly, research should not be appraised depending on subjectivity or objectivity criteria as these means are not adequate to align research paradigms. Secondly, the subjective-objective distinction fails to make discrepancies between different paradigms more explicit. The third argument against this pattern is the misleading result that the subjectivist versus objectivist accounts yield concerning the association between qualitative and quantitative research. In a similar vein, Martin (2002) maintains that the problem with the subjective-objective method is that physical or material things (cars, houses, carpets) can have objective descriptions while their meanings can have subjective interpretations.

3 Major cultural Models :

3.1 Meyerson & Martin’s Three-Paradigm Approach to Culture

Meyerson & Martin (1987) study organizational effectiveness from three major analytical perspectives: integration, differentiation, and ambiguity. This three-perspective framework makes up a major theoretical foundation for investigating and researching cultural contexts, particularly those related to organizational settings.

3.1.1 Integration:

According to the first paradigm, culture is an integrating mechanism that the members of an organization share and “the social or normative glue that holds together a potentially diverse group of organizational members” (Meyerson & Martin 1987 p. 624). Researchers adopting this view differ considerably in describing the levels and manifestations of culture. Therefore, while some emphasize the espoused values, formal or informal practices, and rituals or stories, others focus on the deep cultural representations such as basic assumptions, codes of meaning, and shared understandings. However, Meyerson & Martin (1987) argue that three standard features characterize these depictions of culture: consistent representation of culture, consent between the members, and leadership centeredness.

3.1.2 Differentiation

Meyerson & Martin (1987) hold that unlike the first paradigm's closed-system perception of culture and emphasis on homogeneity and integration, the differentiation paradigm is an open-system perspective that focuses on the contribution of internal and external participants in the forming of culture. What is more, this paradigm highlights diversity and differentiation while seeking to find inconsistencies, disagreements, and non-leader centeredness in its approach to culture. Meyerson & Martin (1987) argue that the second paradigm conceives culture as a group of values and manifestations, which may be inconsistent with one another. Contradictions between espoused values and authentic practices, rituals, and formal and informal norms, and the different meanings of the same words and the various contexts are obvious illustrations of these inconsistencies. In addition to that, this paradigm provides a cultural depiction that highlights the lack of consensus due to several components such as hierarchy, race, ethnicity, and gender. Subcultures can oppose the prevailing culture or can provide support to the espoused values of the top management depending on the functional, national, occupational, ethnic, or project belonging. Meyerson & Martin (1987) refer to the work of Gregory (1983) in which she argues, "an organization is simply an arbitrary boundary around a collection of subcultures" (1987 p.631). This view stresses the multiple sources of cultural content rather than the perception of leadership as the primary generator of culture.

Meyerson & Martin (1987) argue that a combination of these two paradigms is also possible depending on the environment of the organization; therefore, an organization may consist of different subcultures that work within the boundaries of the prevalent culture. However, this conceptual association between these two paradigms can generate many complexities at the highest level of organization, subcultures, as well as at the individual level, which may entail psychological conflict and inconsistencies.

3.1.3 Ambiguity

Meyerson & Martin (1987) further contend that unlike the previous paradigms, which deny or channel ambiguity in culture and cultural change, the third paradigm accepts and legitimates the concept of ambiguity to the point of being named after it. This perspective denies the existence of any shared values and advocates paradoxes among the culture. Therefore, from this perspective's standpoint, ambiguity reflects the 'truth' rather than a temporary phase while seeking to achieve a clear vision. This paradigm criticizes the consistency and consensus elements of the integration paradigm and considers them as tools of control made by the top management.

3.2 Edgar Schein's Model:

Schein (1984) offers a holistic description of organizational culture as the “pattern of basic assumptions that a given group has invented, discovered or developed in learning to cope with problems of external adaptation and cultural integration, and that have worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.” (p.3) This exhaustive account of organizational culture entails a multilevel theory that discriminates between three primary manifestations of culture. These are ‘artifacts,’ tacit and observable policies, structures, and processes, ‘espoused beliefs, values, ideologies and philosophies’ and ‘underlying assumptions,’ taken for granted beliefs and values (Schein, 2010). These are closely interrelated levels, which means that the interpretation of the surface levels (artifacts and espoused beliefs and values) remains insufficient without the description and deciphering of the basic underlying assumptions Artifacts.

Schein (2010) builds up his theoretical framework based on the degree of visibility of each level. Therefore, he assumes that the first level is the most conspicuous manifestation as it displays observable products, such as the architecture, the environment, the language, the dress code, and the technology (Schein, 2010). He also maintains that although this level is readily discernible to everyone, it precludes a deep understanding of culture “the most important point to be made about this level of culture is that it is both easy to observe and very difficult to decipher’ (Schein, 2010, p.24). Simply put, the real meaning of what is seen can be hard to decipher, which may lead to different interpretations of the observable artifacts of the same organization. What is more, the ambiguous nature of symbols makes it a real necessity to dig deep into the underlying assumptions to decrypt the meaning of culture. Schein (2010) warns against the superficial interpretations based on the surface level of ‘artifacts’ as they indeed project one’s feelings and relations. He provides the example of the organizations that are perceived as inefficient for the simple reason that they are seen as loose and informal, while other organizations are considered as lacking innovativeness due to their formal nature (Schein, 2010).

3.2.1 Espoused Beliefs and Values:

Schein (2010) holds that espoused beliefs, values, goals, ideologies, and rationalizations are the main constituents of the second level. These provide the guideline that the members of an organization should follow and mirror the leaders’ perception of what is right or wrong, and therefore, prompt the group to embrace specific approaches to overcome the problems.

However, the group's actions are not transformed into shared beliefs until the leaders propose what they consider working solutions to frequently occurring problems are validated with the help of joint activities and observations (Schein, 2010). The process of verifying the shared beliefs and transforming them into shared assumptions depends on the success of the actions undertaken by the group. Nevertheless, Schein (2010) claims that not all the beliefs and values undertake the same procedure of transformation for two reasons: Firstly, the lack of a reliable solution to a given value and secondly, some values and beliefs such as aesthetic or moral concerns and organizational goals and strategies are not empirically testable. Therefore, their social validation can be secured through the shared social experience of the group

Table 6: The Three Levels of Culture --from Schein 2010 p.24

The Three Levels of Culture:

1. Artifacts

- ✓ Observable and feelable structures and processes.
- ✓ Observed behavior.
- Difficult to decipher

2. Espoused Beliefs and Values

- ✓ Ideals, goals, values, aspirations.
- ✓ Ideologies
- ✓ Rationalizations
- May or may not be congruent with behavior and other artifacts.

3. Basic Underlying Assumptions

- ✓ Unconscious, taken-for-granted beliefs and values.
 - Determine behavior, perception, thought, and feeling.
-

Moreover, Schein (2010) states that both the desired behaviour and the observed behaviour in organizations are more predictable at this level than in the previous one (artifacts). In this respect, he considers that many organizations contend having high- quality products, while their actual record (observable behaviour) disproves their claims. Ultimately, Schein (2010) emphasizes that the only way to get a profound and extensive grasp of the current and future behaviour is through a thorough investigation of the third level, 'the basic underlying assumptions.'

3.2.2 Basic Underlying Assumptions

Schein (2010) refers to the 'basic underlying assumptions' as the hypotheses that turn into taken for granted solution owing to their repeated success in overcoming the problems encountered. Schein (2010) differentiates between these assumptions and 'dominant value orientations' that some anthropologists introduce as the 'preferred' solution among a wide range of manifest alternatives of variant and dominant orientations that the members of an organization follow. In this respect, other behaviours become inconceivable as the shared beliefs and values foster themselves within a social unit due to their successful recurring outcomes. For instance, it is considered an implausible behaviour to commit suicide for the sake of a group whose basic assumption favours the individual's right over the group. Schein (2010) refers to Argyris & Schon's (1974) 'theories-in-use' as "the implicit assumptions that guide behaviour, that tell group members how to perceive, think about, and feel about things" (P, 28). He conceives this description as similar to his account of the basic assumptions in that they are non-debatable and none- confrontable.

The basic assumptions are so taken for granted to the extent of becoming resistant to change as Schein states "such learning is intrinsically difficult because of the re-examination of the basic assumptions temporarily destabilizes our cognitive and interpersonal world, releasing large quantities of basic anxiety." (Schein, 2010. p, 28). In other words, humans are endowed with a psychological, cognitive process that ensures the stability of our minds through avoiding any questioning or challenging of an underlying assumption. This is the reason why we tend to perceive the events around us as congruent with our assumptions despite the risk of distorting and falsifying the situation. According to Schein (2010), the ultimate power of culture lies in how these assumptions determine the way we should react emotionally to what is occurring, what to pay attention to, and what activities to take in different situations. Therefore, our feelings of comfort or vulnerability towards people around us depend on whether we share the same set of assumptions or not.

Schein (2010) hypothesizes a three-level structural model that credits the understanding of the 'core' of culture to the 'basic assumptions.' In other words, the decipherment of the 'artifacts' and 'espoused values' depends mainly on the decryption of these assumptions. The leaders provide the principal source of the values that guide the members of a given group to handle the internal and external difficulties. According to Schein, these values and beliefs shape and constitute the group identity. This, however, makes culture challenging to change. Hence, the role of leaders is to alleviate the anxiety that may result from challenging these assumptions.

3.3 The CVF Model:

Robert Quinn develops the competing value framework gradually, along with a bunch of scholars to study the far-reaching impact that organizational culture has on organizational performance. This model has been developed from well-established theoretical and empirical underpinnings (Quinn & Rohrbaugh, p.1983, p 363). For this reason, they put together the heads of 52 organizational experts to analyze and inventory Campbell's (1977) significant indicators of performance. The objective is to abridge them into a comprehensive framework that would account for the most underlying organizational culture dimensions in a concise and pertinent fashion.

What is more, this pattern can be used as the conceptual framework to explore organizational culture, leadership theories, organizational development, and the life cycle of organizations. (Bluedorn & Lundgren, 1993; Cameron & Freeman, 1991; Quinn & Kimberly, 1984; Zammuto & Krakower, 1991). Many scholars have referred to the implementation of this framework for more than 25 years for the exploration and assessment of organizations (Cameron, Quinn, DeGraff & Thakor, 2006).

Unlike other models, which contain long and inconsistent dimensions, the CFV proves to be one of the most practical and comprehensive models in the literature of organizational culture (Dension and Mishra, 1995; Lamond, 2003).

The four types of organizational culture (clan, adhocracy, market, and hierarchy) are identified according to two dimensions. The first dimension makes a distinction between the organizational effectiveness criteria in terms of two contrasting features (flexibility and discretion versus Stability & Control). The second dimension distinguishes between the organizational effectiveness criteria that emphasize internal focus and integration and those, which articulate external focus and differentiation (Quinn & Rohrbaugh, 1981; Cameron & Quinn, 2006). These dimensions comprise a set of values that characterize each of the four quadrants of this framework.

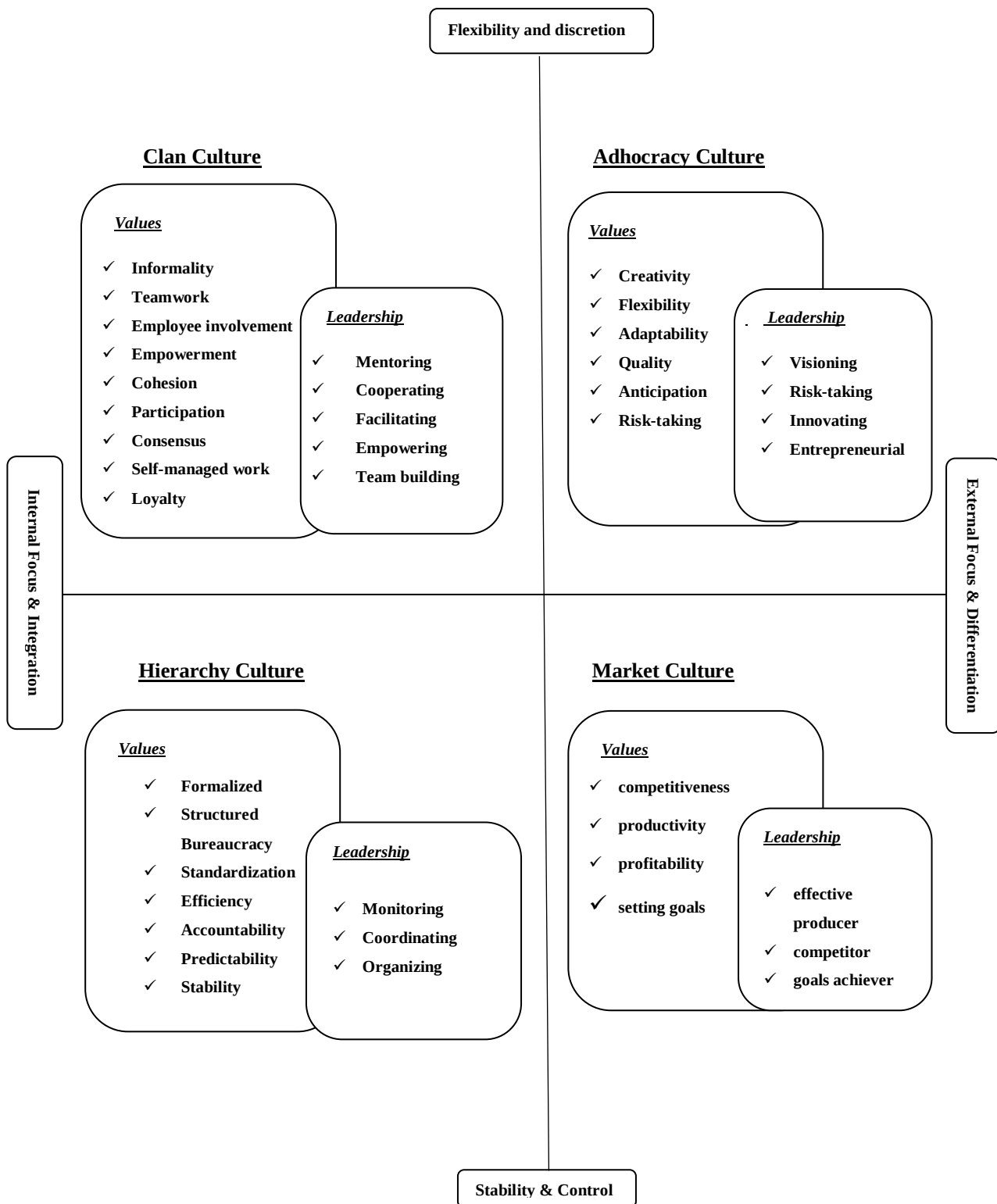


Figure 6: The Competing Values Framework: Values and Leadership. Adapted from figure 3.1 (2006), in Kim S. Cameron and Robert E. Quinn, Jossey-Bass, p.3

3.3.1 Clan Culture:

This type of culture is characterized by its inclination towards the internal climate of the organization. Its primary concern is to foster the informal and amicable correlation between the employees and the leadership. The prevailing climate of cohesion and teamwork boosts employee involvement and participation. The organization is regarded as a household where everyone invests heavily in self-managed work. Leadership places a premium on loyalty and commitment by facilitating the tasks and empowering individuals via rigorous human development programs. Therefore, the leaders are mentors and team builders who link success to the prevailing internal climate within organizations.

3.3.2 Adhocracy Culture:

This externally-oriented type of culture focuses on the change as a booster of creativity and innovation among employees. These cultures are considered as “tents rather than places” due to their flexibility and adaptability to different circumstances. Therefore, adhocratic organizations place much emphasis on individuality, risk-taking, and anticipating the future (Cameron & Quinn, 2006). The leaders’ role is to prompt the employees to think out of the box and predict any opportunities for innovation.

3.3.3 Market Culture:

According to the competing value framework, the market culture has the prospect of addressing external constituencies such as contractors, regulators, and customers. This denotes that it has the same function as that of any market concerning the economic mechanisms that govern the transactions. The basic assumptions underlying this type revolve around competitiveness, productivity, and profitability. It also assumes that setting goals and incentives trigger the employees’ motivation and performance. The leaders are effective producers and competitors who direct the work towards achieving stretch goals and targets. Market share and penetration are the defining boundaries of any successful performance.

3.3.4 Hierarchy Culture:

The internal orientation of this type of culture is manifested in the highly formalized and structured bureaucracy that characterizes the workplace. The central values that prevail in this culture are long-term stability, predictability, and efficiency (Cameron & Quinn, 2006).

Efficient leadership maintains formal rules, external coordination, and monitoring, and smoothly run organizations.

In all, the CVF model brings together the underlying values and leadership characteristics that delineate each type of culture and relate them to particular criteria of effectiveness and performance. Therefore, the assessment of the effectiveness variable differs from one type of culture to another, depending on the predominant criteria that typify each of the two dimensions. According to the first dimension, some organizations are perceived to give a compelling performance if they display adequate flexibility and adaptability. Others are recognized to be effective only when they demonstrate predictability and stability.

On the other hand, the second dimension highlights internal and external features as major criteria to appraise the level of effectiveness of organizations. Therefore, while internal unity and harmony are highly valued within well-performing organizations (clan and hierarchy), the external competitiveness along with the interplay of outside factors and entities do form the primary parameters of effective performance among other organizations (adhocracy and hierarchy).

In all, these three prominent endeavours to categorize culture into distinct typologies are the outcome of fierce competition between different schools of thought to simplify the intricate theories and doctrines of organizational culture. Thus, Meyerson & Martin's (1987) three analytical perspectives (integration, differentiation, and ambiguity); Schein's (1984) layers of culture (artifacts, espoused beliefs and values, and basic underlying assumption; Cameron & Quinn's (2006) four types of culture (clan, adhocracy, market, and hierarchy), these models do have practical implications on the study and analysis of a culture in HEI. In this respect, it is worth mentioning that the CVF model, which is developed by Cameron & Quinn (2006), constitutes the basis for the conceptual framework adopted in this section.

4 The Relevance of the CVF Model to Higher Education Research:

Cameron (1986) implemented the CVF and discovered that the adhocracy and hierarchy quadrants are highly manifested in most higher education institutions. Cameron & Freeman (1991) surveyed 334 universities using the CVF. The results confirmed the existence of more than one culture in all the studied educational institutions with noticeable cultures in the majority of the colleges and universities.

Zammuto and Krakower (1991) conducted research on college cultures using CVF. This study consolidated this framework as a pioneer tool for exploring higher education institutions.

Pounder (2002) used the CVF to study the “quality” dimension and its relevance to institutional performance assessment of higher education institutions in Hong Kong. He concluded that “quality” should be further investigated to be validated as a reliable concept. Smart (2003) explored the relationship between organizational culture effectiveness and culture within community colleges. Berrio (2003) described the dominant culture in the Ohio State University Extension (OSUE) while adopting the CVF. The outcomes demonstrated that roughly two-thirds of higher education institutions across America were working within the human relation model. Vilkinas & Ladyshevsky (2011) investigated some 90 academic directors and 710 related personnel using the CVF model. Their study accounted for how effective are the academic program directors in getting the job done. These eminent studies promoted the use of this framework as a trustworthy psychometric premise to quantify culture in higher education institutions.

5 Moroccan Culture through the Empirical Lens of the 6-D Model:

The Dutch professor Geert Hofstede has initiated a large-scale series of cross-cultural studies along the period extending from the 1970s to 2010. Hofstede’s (1980) primary concern is to study the variables affecting the dominant culture in IBM multi-national company to draw a clear picture of cultural differences between countries. He builds his extensive research upon his famous account of culture as “The collective programming of the mind which distinguishes the members of one group or category of people from another.” (Hofstede 2011, p.3). This description does not assume that all members of a given society are programmed in the same way or have identical systems of ideas; it instead recognizes the discrepancies existing among the members of the same society while referring to the prospect of having substantial cultural differences between various countries. Therefore, in order to assess the impact of the national values of the employees on the culture of IBM, Hofstede surveys wide-ranging international participants who belong to different ranks and professions. The sampling process targets a diversified population of students from 23 nations, managers from 14 countries, customers from 15 countries, and pilots from 15 commercial airlines. The substantiality of this empirical research is manifested in the number of IBM employees that exceeds one hundred thousand and the 116.000 questionnaires that have been distributed along roughly five years. These surveys are loaded with questions tackling cultural differences and values. The questionnaires are scored according to a 0-100 scale of assessment. Score 50 constitutes the middle-level average. Thus, any dimension that scores below 50 is considered LOW, whereas the dimension that scores above 50 is appraised as HIGH. It is worth mentioning that the scores listed in the graph

below are partially from Hofstede's studies as other research findings (e.g., the fifth and sixth indexes) were endorsed and integrated into this model.

Hofstede adopts diverse methods of data collection that range from personal paper-and-pencil surveys (1968-1972) to statistical treatments of the enormous database accumulated by IBM (1967-1973), the adoption and incorporation of other relevant research findings into the final version of his 6-D model. Notably, the addition of the fifth dimension (Time-Orientation) based on Michael Harris Bond's work in 1991 (Hofstede, 1991: p.160) and the sixth dimension (Indulgence versus Restraint) based on Michael Minkov's creation in 2010 (Hofstede et al., 2010). The initial phase of Hofstede's study consists of a massive collection of data from IBM's worldwide subsidiaries that cover more than 70 countries. His preliminary analysis of the data includes only 40 nations with the highest representativeness of the respondents. Subsequently, his research encompasses other cultures and covers 50 countries and regions, including Morocco, the subject of the current study. The preliminary, as well as the supplementary outcomes (1980, 2002, and 2010), serve to develop the ultimate version of Hofstede's multidimensional model based on six major indexes. These are Power Distance (PD), Uncertainty Avoidance (UA), Individualism versus Collectivism (IDV), Masculinity versus Femininity (MAS), Long-Term Orientation versus Short-Term (LTO), and Indulgence versus Restraint (IND). It is worth mentioning that the scores illustrated in the graph below are based on Hofstede's official website.

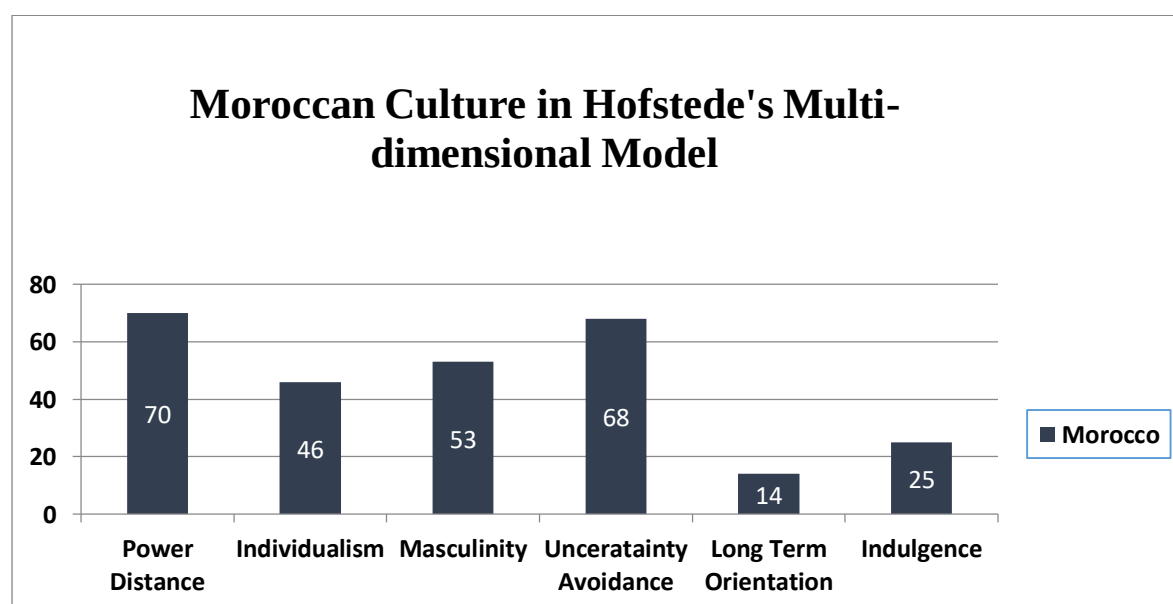


Figure 7: Moroccan Culture in Hofstede's Multidimensional Model. Copyright 2010 by Hofstede's official website.

5.1 Power Distance Dimension (PDD):

The first index is an indicator of the unequal distribution of power among the members of the same society (Hofstede, 1980). Therefore, staggering inequalities and inherent ranking among its members characterize a high-power distance culture. In contrast, a low-power distance culture reflects a relatively high degree of equality and power-sharing among its participants (Hofstede, 1983). This dimension aims at measuring the extent to which subordinates or followers tolerate and yield to the power acquired by managers or bosses. This entails that both followers and leaders agree upon this power inequality.

With a score of 70, Hofstede's research findings categorize Morocco among the hierarchical societies (Hofstede, 2010). This has many implications for Moroccan institutions and organizations at different levels of organizational structure, leader-subordinate interaction, and leadership style. Consequently, this high rate mirrors the rigid hierarchical systems and structures that underlie and govern the relationships between subordinates and leaders. It also denotes a well-defined ranking of everyone in the organization, total centralization of the decision-making at the leadership level, strict definitions of the subordinates' positions and statuses, and absolute concentration of power at the very top of the organization hierarchy. The prevalent style of leadership associated with this type is the autocratic type.

5.2 Uncertainty Avoidance Dimension (UAD):

This second indicator has to do with the strategies that humans resort to in order to avoid or at least alleviate the impact of some affective factors namely, uncertainty, anxiety, ambiguity, unpredictability, and discomfort resulting from unstructured or obscure future situations and events (Hofstede, 1991). Since humans strive to control everything in their surroundings in search of certainty and stability, they feel threatened whenever exposed to new or unusual contexts. This feeling interferes with the inherent need to live and operate in specific and secure environments. For this reason, they bring into play-structured systems such as order and codes, rules and laws, norms, and absolute truths to shuffle off any uncertain circumstances.

Hofstede et al., (2010) highlight two types of culture: high Uncertainty Avoidance culture versus low Uncertainty Avoidance culture. The first category denotes a rule-oriented culture that puts into operation order, laws, rules, norms, and collective truth to create a structured society and to monitor the degree of uncertainty among its members.

The second category refers to the low Uncertainty Avoidance culture that is open to diverse opinions and differences. It allows ambiguity and uncertainty as part of the change process and discovery of new horizons and truths.

The survey assigns a score of 68 to Morocco. This rate places Morocco as a high Uncertainty Avoidance culture. In such a culture, members are in a permanent struggle against the inherent feeling of uncertainty. In addition, they suffer from persistent stress and excessive emotionality and anxiety. Members adhere to rough codes and belief behaviour, show a little tolerance to novelties, and tend to resist innovations. Furthermore, they possess a strong emotional urge for rules though they do not necessarily obey them. They seek structured situations and systems in search of security and clarity.

5.3 Individualism versus Collectivism Dimension (IDV) :

This dimension aims at studying how much an individual is interdependent with their society (Hofstede, 1991). It measures the degree to which one serves their culture and vice versa.

On the one hand, individualism stands for the individualistic tendency to live independently from society except for the closest social circles or immediate family (Hofstede, 1994). This concept revolves around persons as free units that act on their own and take charge of their lives; they make their personal decisions while assuming the consequences of their acts. Moreover, they choose the values they consider most suitable for their perception of living. Simply put, an individual's life is their choice. At the organizational level, this implies a carefully calculated emotional involvement and a particular focus on individual action, initiative, and performance.

On the other hand, within a collective society, individuals identify themselves with their culture. In this sense, members are fully integrated into strong and harmonious in-groups, usually extended families, clans, or organizations that ensure protection and security in return for total loyalty. At the organizational level, this denotes that individuals are emotionally invested in their organizations. They show genuine involvement in the mission and vision of their leadership.

Morocco scores 46 points on this dimension and thus is ranked as a collectivistic culture (Hofstede, 2001). This has many implications on the organizational setting as subordinates have high moral attachment and a strong sense of belonging to the culture in which they operate. The group shapes the individual's opinions and provides the major source of their expertise and knowledge. Group management prevails in the workplace.

5.4 Masculinity versus Femininity Dimension (MAS):

This dichotomy is based on the gender division of values and roles in societies. Therefore, a “masculine” culture is dominated by male assertiveness, ambition, and competition (Hofstede, 1994). Being the breadwinners and providers of financial stability, men prefer labour to the family. They hold positions of power and display less emotional weakness than women usually do. Men have the last word on decisive household issues and decisions. If women do not play the conventional roles of being homemakers, they most probably hold different and inferior positions than men at work.

At the organizational level, masculinity means furious competition, impressive performance, and outstanding productivity. Simply put, masculinity is synonymous with the best possible achievement. Strikingly enough, a feminine society does not necessarily imply women’s manipulation or domination; it rather strikes a balance between the roles of the females and males as it distributes equal responsibilities amongst both components of society. This type of culture allows men to display their emotionality and sensitivity in the same way that it permits women to exhibit their strong character and equal capabilities with men at home and in the workplace. The feminist cultures hold strong beliefs in many values such as modesty, care, and sympathy for the less powerful and misfortunate. It also emphasizes the quality of living as a hallmark of success.

At the organizational level, women and men work side by side and hold similar job titles (managers/ executives: CEO, CFO, CMO, etc.) Moreover, employees love their jobs and like what they do. They look for a balance between social and professional lives.

Morocco scores 53 in the index of masculinity and 47 for femininity. These are quite intermediate rates that allow for a little differentiation and unbalance between the two genders in Moroccan culture (Hofstede, 2001).

5.5 Long-Term Versus Short-Term Orientation Dimension (LTO):

Hofstede’s initial model did not comprise this new dimension. There were only four dimensions (power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity). Hofstede’s decision to join it to the original four was in 1991 in his book *Cultures and Organizations: Software of the Mind*. Yet, the thorough description and analysis of this new measure of culture were in his second edition of *Culture’s Consequences* (2001) as well as in the latest edition of *Culture’s and Organizations: Software of the Mind* in 2005 (Hofstede, 2011.p, 13).

This new index tackles new issues that the previous dimensions do not take into account. More particularly, it compares the gap between the West and the East regarding thought and economic growth. The values advocated by this indicator include members as well as traditions adaptation to the changing social conditions. Other fundamentals that this dimension advances are thrift, perseverance, statuses ordered ranked and acquiring a sense of shame. At the organizational level, it entails the availability of substantial funds and savings for future projects due to the accumulated provisions. This usually leads to economic prosperity and expansion of the organization.

The opposite pole, Short-Term Orientation, is concerned with the past as well as currently taking place events. It suggests a remarkable veneration of customs and mutual greetings between the members. It also focuses on achieving social duties and maintaining stable and steady progress. At the organizational level, this index constitutes a negative indication of the economic stagnation or at least slowing.

Societies that have high scores on this dimension are characterized by a realistic and pragmatic policy towards future vision and development. On the contrary, societies with low scores are considered normative cultures that adhere to strict social norms and regard change with a high degree of scepticism. 14 is the average scored by Morocco. This meagre rate categorizes Moroccan culture as a normative culture that venerates customs and traditions, believes in the absolute collective truth, and strives to realize quick achievements. This reflects the leadership style that sticks to the norms and regulations and plans short-run objectives and schemes.

5.6 Indulgence Versus Restraint Dimension (IND):

This sixth dimension has also been annexed to the previous indexes in Hofstede's last version of the 6-D model in his book in 2010 (Hofstede, 2010). It measures the extent to which a given society permits or manipulates and restrains its members' search from satisfying their desires and passions. Therefore, a tight control culture is referred to as "Restraint," whereas a comparatively loose culture is labelled "Indulgence."

An indulgence culture permits its members to enjoy a large margin of freedom, entertainment, and gratification. This cultural context allows members to satisfy their human desires and fulfil their needs while in pursuit of luxury and "happiness."

Restraint culture, on the other hand, stands for the type of culture that develops an arsenal of social norms and regulations to monitor indulgence and gratification. With the low average

of 25, Morocco is by far a restraint society, a culture that has many social restrictions on the members who feel under the tight constraint of the social barriers and obstacles.

In a similar vein, The Moroccan scholar Mohammed Amine Balambo has conducted an empirical study to measure the Moroccan national culture based on Hofstede's multidimensional grid. The originality of this research, which is published in the *International Journal of Business Quantitative Economics and Applied Management Research* in 2014, lies in the incorporation of the new variable 'Religiosity' into Hofstede's genuine model to explore culture in the workplace context. Therefore, this implementation of the model into the management science can be considered as a pioneering approach in the Moroccan academic context. In this regard, it is worth stressing that Hofstede's model has mostly been used by the Moroccan academics to measure gender-related phenomena or national culture depiction exclusively from a sociological perspective.

Balambo (2014) surveys 283 Moroccan professionals and yields results that depict the Moroccan society as a feminist, hierarchical (high power distance), highly religious, collectivist, and low uncertainty avoidance culture. These results are relatively homogeneous with Hofstede's outcomes, except for the Femininity index that scores higher than its Masculinity counterpart does in the Moroccan study. The Moroccan scholar labels this dimension "Interchangeability of Roles" in reference to the exchangeability of values and power between women and men in society. In the Moroccan study, the score assigned to this indicator advocates the feminist nature of this culture, whereas Hofstede's score is slightly in favour of a masculinity culture. Balambo (2014) is quite explicit concerning the side he advocates when he states that "Our results are in line with assertions Nouiga (2003) and Balambo (2013) on the Moroccan culture, and the results of EL Akremi et al. (2007) in the Tunisian culture, and supporting the predominance of a high degree of femininity in this culture," (p.15). Balambo substantiates the credibility of this feminist inclination by citing Nouiga (2003) who contends that women control the national culture, yet he recognizes the controversy that this concept creates when he introduces other Moroccan scholars with opposite theory in favour of a male-dominated society, namely, Al Maache, 2002 and Eddakir, 2003 (Balambo 2014.p, 12). Concerning the integrated dimension 'Religiosity,' the results display a high score, thus validating the strong religious practices that Hofstede ascribes to the Arab Nations.

Balambo's score on the power distance dimension coincides mostly with Hofstede's categorization of Morocco as a high power distance culture. Both studies describe Morocco as a hierarchical bureaucracy with centralized autocratic and coercive leadership (Balambo, 2014;

Hofstede, 1983). He refers to Mezouar and Semervia (1998), who agree with the assortment of the Moroccan culture among the nations characterized by a high power distance indicator.

The collectivist nature of the Moroccan culture is confirmed in Balambo's research outcomes, thus stressing the strong family ties and social solidarity prevailing in this society. He cites Al Maache's (2002) attribution of this high level of collectivism to the Islamic values indoctrinating charity and unity (Balambo, 2014.p, 9). The last index, Avoidance of uncertainty, displays a low score, which reflects a society characterized by a reduced degree of certainty of the future and prevalent fatalism (Balambo, 2014.p, 10). This work is undoubtedly a valuable and rare contribution to the study and analysis of the workplace culture in the Moroccan context. Unfortunately, there is a staggering scarcity of research in this field. The Moroccan researcher had affirmed this fact when he denied the existence of any prior scores or studies to build upon or compare with his research. (Balambo, 2014.p, 15). Meanwhile, since two dimensions have clearly been distinguished in this study, (either due to the contradictory result of the Femininity index with Hofstede's outcomes in favour of a male-dominated Moroccan culture or because of the integration of a 'new' variable "Religiosity"), many questions concerning the implications of Balambo's findings persist in this paper:

What implications does the "Strong Religiosity" characteristic of the Moroccan national culture have on the surveyed workplace(s), and what generalizations can be applied to the national organizational context? How does "Religiosity" affect the national organizational settings in terms of management style, management-employee relationship, employee-employee association, fanaticism, performance, etc.? What implications does a female-dominated culture have on gender changeability of roles in the workplace, power distribution, gender-based positions, performance, prevailing atmosphere, communication, etc. (at least in the surveyed workplace(s)? What recommendations can be provided to managers and employees in light of the research findings? Similar interrogations about the implications of Balambo's research outcomes in the workplace /organizational context can be extended to the remaining three dimensions (power distance, collectivism, and uncertainty avoidance).

Furthermore, Balambo's application of Hofstede's multidimensional model raises an important point related to his exclusion of the sixth dimension Indulgence versus Restraint with no explicit explanation or justification.

I recognize that the development of practical implications along with any potential recommendations would undoubtedly entail the conduct of an extensive survey with a well-crafted questionnaire (modification of Hofstede's genuine questionnaire to serve this purpose). I also consider that any empirical research based on Hofstede's multidimensional grid should

not confine to a mere diagnosis of the dominant dimensions in a given culture. I would further argue that the real contribution of any academic study (to the little-discovered world of management in the Moroccan context) would rather be through deducing pertinent implications and addressing practical recommendations to managers, employees, researchers, and different stakeholders.

The impressive worldwide implementation of Hofstede's cross-cultural model can be justified by his adoption of a simple method of measurement to appraise cultural indexes. Indeed, the unorthodox idea of assessing the intricate concept culture with straightforward and accessible scores has caused the overwhelming success of this model. The model's initial contribution to cross-cultural management has been immensely extended to other fields seeking easily measured dimensions of culture. However, this fact has prompted many critics to alert the academic world to the risks of taking this model for granted and applying it blindly to every empirical research without taking into account its limitations and weaknesses. In this respect, the growing criticism raised against Hofstede's multidimensional model delineates the differences between three primary viewpoints. (a) The radical view that calls for an utter substitution of Hofstede's contradictory model with a more consistent one (McSweeney, 2002; Baskerville 2003). (b) The moderate viewpoint in favour of filtering and rectifying this famous model before applying it (Smith 2002), and the third opinion (c) which advocates the use of this model provided that other competing frameworks should not be put on the shelf (Harrison & Mckinnon 1999; Bhimani, 1999).

As illustrated in the table 7 below, much criticism addressed to this model lay emphasis on the ethnocentric discourse, the weak or even unfounded theoretical basis, the essentialistic conception of national culture, and the methodological flaws and inconsistencies that undermine this model and question its validity.

McSweeney (2002) adopts a radical view concerning Hofstede's model as he considered its methodology invalid. McSweeney et al., (2010) shed light on what they perceive as a massive gap between the collected data and the obtained results in Hofstede's survey. The methodological problems related to this model were quite explicit in McSweeney et al. (2010):

“As we have seen, the flaws in Hofstede's industrial relations case study cannot be attributed to a data collection or analysis error – it suffers from much more severe methodological problems. The gap between actual data and the predicted outcome is so enormous that we can

reasonably describe the case study as a projective fiction.”
(McSweeney et al., 2010.p, 12).

Table 7: The major critiques of Hofstede’s multi-dimensional model. Based on the present research

Ethnocentric distortion/discourse	▪ Values-driven from superior cultures ▪ Western trailed dimensions ▪ Predetermined values instead of values specific to the participants surveyed.	McSweeney (2002) Baskerville (2003) Magala (2004)
Theoretically unfounded	▪ The default of theoretical basis ▪ Outdated data/ inadequate questionnaire ▪ One multinational organization ▪ Incompatible/ contradictory	Cray & Mallory (1998) Ailon (2008) McSweeney (2002) McSweeney et al. (2010) Smith (2002)
Unvarying conceptualization of nation and culture	▪ Static and homogeneous national cultures ▪ Too quantitative and functionalist ▪ Focus on civic behaviors and values Instead of interplays. • Treating both cultures and nations equally.	Holden (2002) McSweeney (2002) Baskerville (2003) Magala (2004)
Methodological inconsistencies	▪ Inadequate questionnaires ▪ Default of practical implications based on the statistical outcomes. ▪ Failure to account for culture ▪ Unreliable conclusions	Tayeb (1996) Harvey (1997) McSweeney (2002) Baskerville (2003) Ailon (2008)

McSweeney et al. (2010) further doubt Hofstede’s underlying assumptions based on IBM multinational as the unique source of data, IBM employees as inadequate representatives of their countries, and questionnaires as inappropriate instruments to depict culture. In addition to the outdated data that Hofstede based his survey upon, the inconsistency of the outcomes with the data is considered a major issue in his research.

Cray and Mallory (1998) maintain that the model is equivocal and groundless. They criticize the interpretation of individual behaviour by dint of societal features since every individual has a different degree of conformity to the social values.

Smith (2002) reflects the reasonable opinion vis-à-vis this cross-cultural framework. It is worth mentioning that although Smith joins the numerous critiques regarding the theoretical shortcomings entailing this model, he refuses McSweeney's radical view to exclude Hofstede's cultural dimensions. He argues that McSweeney's viewpoint is built upon the inadequate analysis of merely two chosen cultures, which is insufficient to account for the dimensions of cultural variability. Ailon (2008) expresses skepticism about the theoretical and methodological validity of this framework. He warns against an uncritical implementation of these dimensions. He puts under scrutiny the association between cross-cultural research and the depiction of the 'other,' and the so-called objectivity of science. Tayeb (1996) raises concerns about using attitude questionnaires as survey tools to conduct cultural research. Holden (2002) holds that Hofstede's static perception of culture as behaviours and values rather than interactions and interplays in national contexts should not be the basis for a comparative study. Baskerville's (2003) first critique is on Hofstede's assumptions that can readily delude academics and researchers. She claims that the multi-dimensional framework falls short of the primary criteria of culture. She also argues that the model treats equally nation, nationality, and culture. Baskerville builds her criticism on three principal arguments: the inadequate anthropological and sociological foundations of the model, the equal treatment of culture and nation, and the ambiguous association between the dimensions and culture. Another major issue raised by many critics is the ethnocentric distortion upon which Hofstede builds his model (McSweeney, 2002; Baskerville, 2003; Magala, 2004). These scholars agree that the so-called cross-cultural model is built upon western perspectives and values, thus applying a bias dimension to other culturally different countries.

6 Conceptual Framework and Hypotheses for the Effect of Organizational Culture on Organizational Performance:

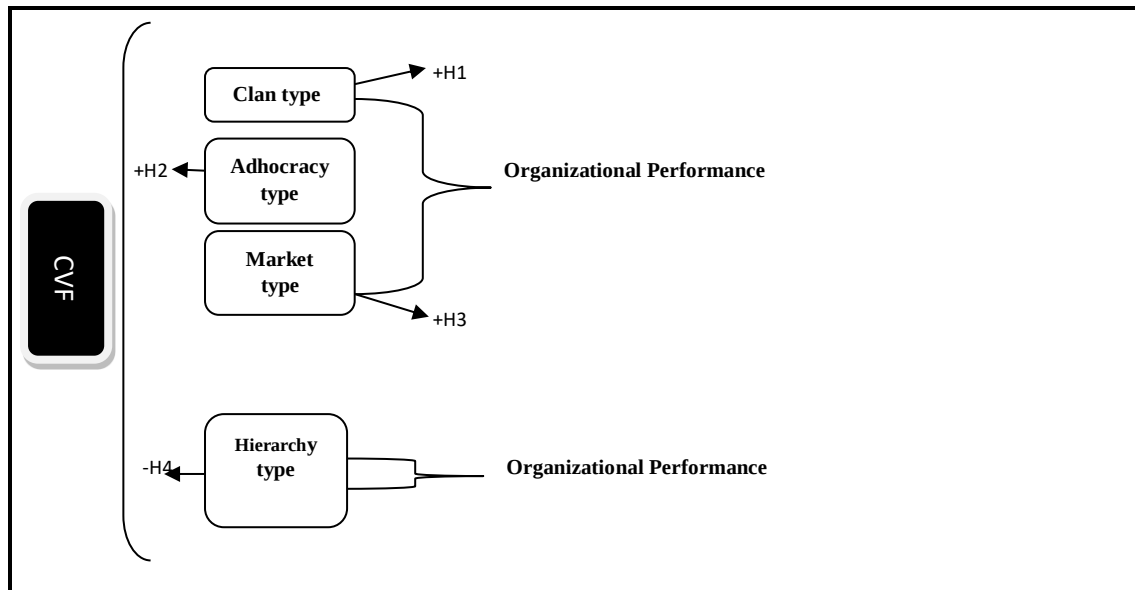


Figure 8: Conceptual model underlying the correlation between organizational culture and organizational performance.

Indeed, many studies have validated the positive correlation between clan, market, and adhocracy cultures with organizational performance. In this respect, Smart et al. (1997) conclude that there are favourable associations between clan, market, and adhocracy cultures, while they appraise the linkage between hierarchical (bureaucratic) culture and performance negatively. Following these findings, Yesil & Koya (2013) develop four research hypotheses in which they posit a positive association between clan, market, and adhocracy cultures with performance; whereas, they claim a negative relationship between hierarchy and performance. The empirical findings confirm their hypotheses. Cameron & Freeman (1991) advocate the positive relationship between adhocracy, clan, market cultures and organizational performance. In the same line, Han et al. (1998) confirm the rising importance of the market-oriented culture to ensure high standard performance. Furthermore, Parker et al. (2003) recognize the favourable liaison between clan, market, and adhocracy cultures with employees' performance.

Similarly, Smart & St John (1996) conclude that clan and adhocracy cultures tend to have higher performance than hierarchy and market cultures. Meanwhile, Paulin et al. (2000) reestablish the influential and robust impact of adhocracy, clan, and market cultures on the organization's productivity. In a similar vein, the three cultures, clan, market, and adhocracy, are positively linked to organizational performance, whereas hierarchy culture is perceived to

negatively affect the organization's financial performance. In the meantime, there is a dominant tendency in the literature to attach the negative effects of the bureaucratic and hierarchical cultures on organizational performance. Accordingly, Paulin et al. (2000) underscore the negative association between the hierarchical type and the organization's performance. This culture is highly bureaucratic and built upon the very standardized relationship between leadership and subordinates. The main managerial tools of leaders are regulations and rules. These are considered as hindrances to motivation, creativity, smooth communication, and initiative taking. This urges Cameron & Freeman (1991) to stress the unfavourable rapport between hierarchy and performance within organizations. In addition, Ogbonna & Haris (2000) deny any link between hierarchical culture and organizational performance. The Hierarchy culture is characterized by heightened formality and requires vigorous leadership that controls everything and anything in the organization. Consequently, the absence of resilience between the management and the employees leads to unsatisfactory outcomes and underperformance as the organization becomes contingent upon the leader's personality, skills, and competencies. Moreover, Moorman et al. (1993) accentuate the negative influence of organizational performance's hierarchical values. Organizations characterized by such an environment tend to be wrapped up in themselves, highly autonomous, and self-contained to the extent of restricting competition and innovation. This prompts Deshpandé et al. (1993) to underline the negative impact of hierarchy on performance. From these arguments, this paper proposes the following hypotheses:

7 Organizational Culture Research Hypotheses:

Hypothesis 1: A **Clan culture** type in Moroccan universities will exert a *positive* effect on the employees' performance.

Hypothesis 2: An **Adhocracy culture** type in Moroccan universities will exert a *positive* effect on the employees' performance.

Hypothesis 3: A **Market culture** type in Moroccan universities will exert a *positive* effect on the employees' performance.

Hypothesis 4: A **Hierarchy culture** type in Moroccan universities will exert a *negative* effect on the employees' performance.

8 Section Summary:

The examination of the abundant literature on organizational culture has led the researcher into insightful critical readings of the most influential schools of thought and philosophical models underlying the construct of culture and its implications for higher education institutions. The founding fathers of organizational culture theory, namely Burrell & Morgan (1979), Smircich (1983), and Allaire & Fursirotu (1984), have raised controversial issues touching the ontological and epistemological roots of knowledge and the nature of the environment (culture) surrounding us. The rich and ample debate is due to the conceptual divergence between these pioneers who theorize on culture's nature and its influence on organizational settings. This leads to the subjective-objective polarization among different schools of thought. Furthermore, other eminent theorists have adopted the same mainstream of reasoning. For instance, Burrell & Morgan (1979) develop a four-paradigm matrix that interprets social reality based on the subjective-objective dichotomy. Meanwhile, other scholars have initiated many endeavours to assort culture according to distinct typologies. In this regard, Meyerson & Martin (1987) analyze culture from three analytical perspectives: integration, differentiation, and ambiguity. Schein (1984) posits three layers of culture: artifacts, espoused beliefs and values, and basic underlying assumptions. Cameron & Quinn (2006) provide four types of culture: clan, adhocracy, hierarchy, and market cultures. Most importantly, Hofstede's (1980) 6-D model is particularly pertinent to this paper as it investigates Moroccan culture from six major dimensions. The results of this large-scale empirical study provide an unprecedented depiction of Moroccan culture. According to Hofstede's findings, Morocco is a very hierarchical, collectivistic, masculine, normative, and restraint country, which is also characterized by a high uncertainty avoidance dimension. These characteristics of the national culture do have straightforward implications and effects on Moroccan organizations. This section's conceptual framework is based on Cameron & Quinn's (2006) CFV model. It postulates four major hypotheses built on each culture's negative or positive effect on the organizational performance within Moroccan universities. Therefore, the three first hypotheses claim a positive impact of the clan, adhocracy, and market culture on universities' performance. In contrast, the fourth hypothesis claims a negative influence of the hierarchy culture on employees' performance within HEIs. The objective behind studying these four hypotheses, along with validating them or not, is to provide answers to the research questions related to the dominant organizational cultures in Moroccan higher education and the effect of organizational culture on performance.

Section Three: Total Quality Management

Introduction

This section of the dissertation covers a lot of ground concerning the theories, models, and applications of the total quality management in higher education. The researcher starts from the conviction that universities' performance cannot be effective without the streamlining and implementation of TQM strategies. Therefore, a comprehensive search in TQM's origins and its primary schools of thought has been undertaken throughout the vast literature underlying this management theory in this research. In this respect, the five major quality gurus (Deming, 1986; Juran, 1974; Crosby, 1984; Ishikawa, 1989) are highlighted and analyzed to stipulate the philosophical boundaries of this study. The objective is to provide the conceptual framework for TQM's empirical applications in tertiary education in the Moroccan context. Notwithstanding the considerable scarcity of the research on quality in Moroccan higher education, this paper finds in the legislative and regulatory frameworks of the national reforms the gold mine of information related to the execution of the three cornerstones of TQM: financial applications, academic applications, and administrative applications. These are the hallmarks for the new conceptualization of the national reform of higher education based on the notion of the autonomy of decision-making at all levels and aspects of university management. Accordingly, the introduction and analysis of the concept of governance within HEIs are at the heart of this research. In this regard, two significant typologies of governance are delineated in this study: the first typology is Clark's (1983) 'triangle coordination' model, which distinguishes between three modes of governance: 'state control,' 'market-oriented,' and 'self-rule' models. The second typology is Van Vught's (1989) governmental steering typology, which recommends a necessary shift from the 'state control' to 'state supervision' model of governance. This paper further argues that Moroccan higher education adopts a hybrid or intermediate type of governance. This view is built on the researcher's argument that only a partial implementation of the reform has been undertaken in the three applications (financial, academic, and administrative) of TQM. Indeed, despite the broader freedom granted to the internal structures (University General Council, etc.) in charge of taking financial and academic decisions, the state still exercises a noticeable influence on the running of universities through the medium of the external structures and institutions (Higher Council of Education, the National Coordination Committee for Higher Education etc.). Seemingly, these intrinsic bodies are established to ensure quality assurance of HEIs. They oversee, assess, and accredit the national programs and institutions. Ultimately, this section proposes three hypotheses based on

TQM applications underlying total quality management's effect on organizational performance in Moroccan universities. Accordingly, it is assumed that financial applications will generate a negative effect on employees' performance, whereas academic and administrative applications will generate a positive influence on organizational performance.

1 Development of Total Quality Management

Dale (2003) tracks down the four major stages that characterize the evolution of total quality management (TQM), namely, quality inspection, quality control, quality assurance, and total quality management.

Quality Inspection phase: this phase entails the inspection of products and services to conform to the terms of quality required by the manufacturer or organization. It serves to evaluate and survey products at a specific phase of the production process. Therefore, inspectors make instant decisions based on the actual defects or quality problems they encounter. Thus, they may decide to reproduce (redesign or modify) the product, sell it as an inferior quality commodity, or discard its production altogether. The objective is to get defect-free goods to satisfy customers.

Quality Control phase: this phase includes the development of systematic statistical instruments and clear quality guidelines and standards to monitor the process of quality performance (Dale, 2003.p, 21). This phase goes beyond detecting quality issues to testing and documenting data related to the past cycles and spreading a philosophy of self-inspection among everyone in the organization. Quality control procedures guarantee a more efficient control of quality at different operations across various organizations.

Quality Assurance phase: Dale (2003) determines four components of quality assurance: quality system, quality costing, problem-solving, and quality planning. This denotes a significant shift from product-based quality to system-oriented quality. Accordingly, the organization should establish a system of control and assess it with the aid of auditing bodies. Auditing is crucial to decide on quality costing (cost-effectiveness, profitability, quality investment, and estimates) and quality planning. It is worth mentioning that while quality control relies mostly on inspecting products or services, quality assurance takes preservative measures to avoid quality issues.

Total Quality Management phase: this comprehensive stage includes all divisions, sections, and departments of the organization. This means that quality should be everyone's duty and responsibility, from the top management to the lowest ranking employees. Senior management should have a clear, applicable strategy for quality achievement. Any organization

claiming to implement a total quality management policy should assess all costs related to quality to make lucrative and adequate investment decisions. It should also build a robust quality system that caters for the quality upgrade. Furthermore, it should empower subordinates and gain suppliers' and customers' trust (Dale, 2003, p. 21). The philosophy of Total Quality Management is that quality should not be restricted to products but also the image, reputation, culture, finance, market share, and employees' needs in the organization.

2 Major theories of Total Quality Management

This literature review brings into focus the five most influential approaches to Total Quality Management, which belong to two primary schools of thought. Therefore, an analysis of the five quality gurus (experts) Deming (1986), Juran (1974), Crosby (1984), Feigenbaum (1986), and Ishikawa (1989) provides the philosophical underpinning that underlies the theories of quality management. These five gurus belong to two distinct schools of thought. The first school of thought relies heavily on statistical tools and instruments to monitor quality. It sets exceptionally high and intricate standards for work accomplishment and emphasizes technical procedures and processes to control products and services' quality. The second one focuses on management. It highlights the effects of managerial attitudes and policies on quality implementation. It also perceives management as a catalyst for quality achievement. Hence, the postulation that the attained quality's degree depends merely on the management has seen the light.

2.1 Deming's Quality Management Theory:

Most literature overviews give credit to Dr. W. Edwards for laying down ground rules for Total Quality Management. The worldwide fame and spread of TQM are attributed to the scholar whose experience in Japan, in the early 1950s, greatly affected the industry's world as he founded and introduced his new management theory. This revolutionary theory emphasizes the constant upgrading of the personnel through intellectual and educational progress, fixedness of the objectives, and overcoming the restrictions that may hinder the feeling of contentment that accompanies realizing the goals.

Deming (1986) perceives quality as a tangible series of actions and methods leading to the tasks' adequate performance according to the desired procedure that guarantees premium quality. Accordingly, he comes up with fourteen practical standards or recommendations that organizations should implement to achieve excellence. These fourteen cornerstones of Deming's management theory are reformulated and discussed in the following inventory:

- **Setting a permanent purpose to stay competitive by upgrading products and services.** The most significant part of the top management's responsibility is to design a clear and appealing statement of purpose. It should clearly state its overall strategic operation plan and integral values and principles. It should be addressed to both internal and external stakeholders, such as employees, customers, shareholders (in the case of stock notated companies), creditors (e.g., banks), and the personnel (as in the service sector). Stating the purpose makes them aware of what they should expect from the firm in both the short and long run. The ultimate objective is to stay ahead of the competitors and gain a large portion of the market share.
- **Embracing the latest doctrines and principles of quality to meet the new challenges of the economy.** Newly appointed managers or executives seeking to establish and change the existing quality approaches should work towards adopting and implementing the new philosophies by everyone in the organizations if they aspire to develop effective quality systems. They should keep up with the changing and volatile economy by implementing the most updated theories and committing to their successful application.
- **Altering the quality based on mass inspection into the quality based on products.** Inspecting the quality system can be a real burden in terms of financial and human resources. Indeed, large-scale control of the employees' performance, machines' operationality, and different production processes can be very exhausting and costly. Therefore, Deming suggests statistical monitoring and tracking of quality at all levels of the organization.
- **Building business relationships with suppliers based on reliability and trustiness instead of price or quantity.** The price-quality equation should be taken into account when transacting or dealing with suppliers. Ensuring long-run quality measures and business relationships should also be a priority for the manager.
- **Adopting an ongoing upgrade of the different stages through which products and services are developed reduces expenses.** Proper management should never be satisfied with the current status quo of the products and services. Instead, it should establish an ongoing and everlasting process for the quality upgrade. This should be included in the organization's culture eventually.
- **Providing basic training programs to enable employees to acquire the necessary skills to perform the job using a streamlined approach to quality achievement.** Deming articulates the importance of the acquisition of the fundamentals of statistical quality control by the employees. He considers the training on these skills

as an integral part of the quality performance and stresses the top management's responsibility to institute it within the organization.

- **Establishing leadership and supervision management that would support subordinates and machines to give their best performance.** Supervision should shift from monitoring accounting numbers to ensuring the excellence of execution. High productivity is immediately linked to quality upgrading.
- **Creating an atmosphere free from fear and anxiety within organizations to ensure effectiveness and productivity.** Fear is a severe hindrance to quality achievement. If employees show reluctance to report quality issues, the problem will persist and result in poor quality performance.
- **Reacting to the lack of individual and group collaboration and coordination by creating interdepartmental teams that can locate and overcome any potential obstacles to production.** Without collaboration teamwork at the various levels of the organization, the quality improvement would be impossible. Therefore, no barriers between marketing departments, financial departments, sales departments, and top management should exist.
- **Casting aside slogans and instigations urges the personnel to perform with zero defects and develop higher productivity levels that can be beyond their capacities.** Some objectives are irrational and even impossible to achieve because they lack clear and practical procedures to be put into effect. For instance, "Zero defects" performance can be beyond the employees' ability if the necessary managerial tools are not available. Even worse, some of these slogans may result in opposite outcomes as they boost disappointment and anxiety among employees.
 - **Leadership should replace work standards (quotas).** - **Leadership should replace management by objectives, management by numbers, and numerical goals.** Quotas are impeding stumbling blocks to quality improvement as they do not give any assistance to employees in their tasks. They instead create conflicting and hostile relationships.
- **Preserving the subordinates' pride of workmanship by getting rid of the annual merit rating and the management by objectives.** The management should maintain the pride and dignity of the hourly workers. This is quite a psychological matter that needs to be given priority as it affects workforce quality performance. Therefore, the managers' behaviours and practices should consider this sensitive factor when handling performance or quality issues.

- **Instituting intellectual progress by developing an efficient educational program.** Continuous learning of the statistical theories and their practical application is an integral part of the job.
- **Involving all the institution members in the firm's transformation process and prompting them to contribute to the accomplishment of the change.** Quality implementation is the top management's duty that should induce all the members to adopt its vision of quality and contribute the organization transformation aiming at progressing and improving at all levels.

Deming's (1986) fourteen managerial guidelines are recognized worldwide as a comprehensive roadmap for attaining higher-level quality. That is why he recommends its implementation highly if the organization seeks to evolve quality at different levels and departments. Furthermore, he argues that these guidelines apply to all types and sizes of organizations.

It is undeniable that Deming holds the top management responsible for the foundation, upgrade, and delegation of quality methods and procedures at the various levels and departments of the organization. He further argues that senior management has to breathe new life into the employees' actions and accomplishments of tasks. Hence, the assumption that quality is, first and foremost, related to the management. In other words, if the leadership is committed to the institutionalization of quality and works towards its systematic implementation, the employees will undoubtedly follow their leaders' vision of premium quality achievement. The outcomes will indeed be a professional completion of the tasks that meet the customers and the organization's quality requirements and expectations. In this sense, top management becomes a catalyst for quality.

2.2 Feigenbaum's Total Quality Control:

Armand Feigenbaum is known worldwide as the developer of "total quality control" conceptualization, underpinning the firm-wide quality approach. It comprises all quality-related managerial facets and control measures such as the total personal commitment of the top management, the establishment of a robust quality system, and measurement of quality by systematic tools, process improvement, human resources intellectual and professional upgrade through continuous training, and free-error work (Munizu, 2013). Total Quality Control is usually perceived as the generating approach to the modern Total Quality Management theory.

Dale et al. (1994) maintain that Feigenbaum's TQM description entails three elements: Quality development, quality maintenance, and quality improvement. These components are

brought together in a joint effort performed by different organizations to satisfy customer needs and gain a fair market share.

Feigenbaum (1986) designates four main courses of action for quality control. Design control takes place at the initial phase of the product's architecture and design. It should meet the expectations of customers and prove itself as a competitive product in the market. Material control includes ensuring the conformity of raw materials with the production process's quality norms and standards. The product control phase requires that the final product pass the last quality check and double-check before it is delivered to customers. Particular process studies phase includes the revision of specific production procedures to adjust and correct them in recurring defects. Furthermore, Feigenbaum also devises the nine bases of quality control (also called the 9 Ms). These are markets, money, management, men, motivation, materials, machines and mechanization, modern information methods, and mounting product requirements.

2.3 Juran's Quality Improvement Approach:

Joseph M. Juran followed in Deming's tracks and lectured in Japan on the top management's decisive role in providing patent objectives for quality achievement. He was considered one of the most influential scholars who contributed to establishing the concept of quality as a necessary component of organizational success. Juran dedicated his long-standing research to concretizing an extensive process that would provide executives with applicable effective managerial guidelines. The remarkable transition from theory to practice would give rise to an unprecedented interest in the conditions and standards of achieving excellence and quality.

Juran's perception of quality as fitness for use matches the stakeholders' viewpoint and customers who seek products and services that conform to high-quality standards. As demonstrated in the figure 9, Juran (1974) goes into detail about these quality features and determines four main components: quality of design, quality of conformance, availability, and field service. Juran provides the vital areas of excellence that managers should focus on to establish an adequate quality system within their organizations. In this respect, managers should survey the market to form a pertinent concept of their products or services' specific attributes and features. Furthermore, products should conform to the new technologies that dominate the industry or service and take special care of their workforce training, competence, and needs. To gain a good market share, the organization and its products should be reliable, trustworthy, and well-known by their integrity.

FITNESS FOR USE	QUALITY OF DESIGN	QUALITY OF MARKET SHARE
		QUALITY OF CONCEPT
		QUALITY OF SPECIFICATION
	QUALITY OF CONFORMANCE	TECHNOLOGY
		MANPOWER
		MANAGEMENT
	AVAILABILITY	RELIABILITY
		MAINTABILITY
		LOGISTICAL SUPPORT
	FIELD SERVICE	PROMPTNESS
		COMPETENCE
		INTEGRITY

Figure 9: Juran's Definition of Quality
(Source: Juran (1974), p. 2-9)

Juran incorporates these features as part of a continual cyclic process that starts with the design of the product, moves through the manufacturing and testing phases, and ends with sales and resurveying the market to optimize the product. The process is repeatedly implemented to meet customer-changing needs and maximize quality.

Juran's conceptualization of quality is, first and foremost, built upon the conformance of products and services to specifications and limiting the cost of quality. By and large, Juran's conception of quality implementation within organizational contexts is perceived to be less sophisticated and less demanding than Deming's approach to quality achievement. Deming calls for a radical transformation within organizations if they seek to implement his fourteen managerial guidelines effectively. On the other hand, it is considered that Juran's flexible approach suits the traditional management perfectly, and therefore, has more chance of success, especially that change is usually faced by resistance. Moreover, Juran builds a set of quality dimensions that entails planning, control, and improvement.

He argues that this phase should include a systematic course of action and a well-defined scheme to satisfy customer needs concerning quality planning. As for quality control, it aims at ensuring excellence at different processes of production. Ultimately, quality improvement aims

at enhancing products and services to make them better. Juran goes beyond Deming's assumption that the top management is the number one responsible for quality implementation, and he builds a broader perspective of quality improvement. Therefore, he developed an all-inclusive approach to quality improvement that comprises ten fundamental steps:

- Build awareness for the need and opportunity for growth.
- Set goals for improvement.
- Organize people to reach their goals.
- Provide training throughout the institution.
- Carry out projects to solve problems.
- Report progress.
- Give recognition.
- Communicate results.
- Keep score and assess overall progress.
- Maintain momentum by making annual improvement part of the conventional systems and processes of the institution.

These are the major constituents of Juran's roadmap towards accomplishing efficient management and quality improvement in organizations.

2.4 Crosby's Quality Improvement Approach:

Philip B. Crosby, the founder of the zero defects performance standard (process), has a pragmatic perception of the notion of quality that leverages gains and limits costs. Crosby (1984) describes the concept of quality as conformance to requirements and the non-conformance processes as the measurement tools of quality. His famous program relies heavily on maximizing cost-effectiveness by generating high-income and controlling charges through ensuring a premium quality of products or services. Crosby's account of quality improvement's major distinctive features lies in highlighting the leading roles of planning and motivation in optimizing work within organizations. This shows his disagreement with Deming and Juran's perceptions of the quality based on statistical monitoring and intricate problem-solving procedures. Crosby follows the example of Deming and develops a 14-step program for improving and upgrading quality.

- **Management Commitment.** Employees would not embrace any quality approach unless the top management is fully committed to the quality vision it adopts. Indeed, top managers' engagement and participation are crucial to the program's effective implementation by the rest of the organization members. Therefore, senior management

should provide a model for its subordinates to follow. To this end, it should communicate the standards of quality that the organization and customers expect them to adhere to by issuing a written policy.

- **Quality Improvement Team.** An interdepartmental team should be formed to execute the fourteen steps scheme and ensure that different organization sections and divisions apply them well.
- **Quality Measurement:** Clear rules and measures related to quality performance should be determined throughout the organization. These measures would constitute the grounds for detecting the weak areas of quality and take the necessary steps to adjust or improve them.
- **The Cost of Quality Evaluation.** The interdepartmental team responsible for quality improvement, together with the quality department (if it exists), coordinate their estimates of the costs of quality related to the previously determined weak areas and decide particular corrective measures. This would undoubtedly help decision-making at the top management level concerning selecting the lucrative disciplinary actions.
- **Quality Awareness.** Raising quality awareness takes place at all levels of the organization. At the top management level, managers should make their interest in the quality improvement program quite explicit to everyone. At the supervisory level, professional supervisors should disseminate information on the costs of quality. At the subordinates' level, the employees and workforce should assume their portion of responsibility in applying these measures and adhering to the quality policy of the organization.
- **Corrective Action.** An integral part of improving quality is taking corrective and restorative measures to upgrade products and services. Therefore, establishing a system of countermeasures that aim to optimize quality would instill the notion of excellence in the subordinates' minds. Particular attention should be given to the previously detected areas of correction in stages 3 (quality measurement) and 4 (cost of quality) to take the necessary practical actions to improve them.
- **Establish an Ad hoc Committee for the Zero Defects Program.** A selected committee from the interdepartmental team responsible for quality improvement takes charge of studying and inspecting potentials for the execution of the zero defects program throughout the firm.
- **Supervision Training.** This step is of paramount importance to the adequate implementation of the zero-defects program. It entails rigorous training of managers to

get a good grasp of the various phases of the program. Supervisors should be able to make the plan clear to everyone by describing every stage in more detail and revealing practical procedures for its achievement.

- **Zero Defects Day.** A day for zero defects performance should be held to lay the foundation and establish the new philosophy of quality performance. This day aims to ingrain the values of the new approach of quality into everyone's mind.
- **Goals Setting.** Subordinates should be trained to set their objectives and work towards their realization. They should be induced to set short, medium, and long-term objectives that are manageable and attainable.
- **Error Cause Removal.** Reporting persistent problems on the part of employees is crucial to ensure free-error work. Therefore, employees should not only be encouraged to detect quality issues within twenty-four hours but also to figure out workable solutions to these problems.
- **Recognitions.** Crosby advocates strongly the idea of developing awards programs that aim at recognizing the efforts of those who outperform and innovate within organizations. Meanwhile, he prefers public recognition over the financial one as it boosts motivation and performance.
- **Quality Councils.** Regular meetings should be held to discuss and spot out the necessary actions needed to enhance the different quality schemes and programs under execution in the organization.
- **Do it over again.** Continuous and permanent education should be the top priority of the organization. Therefore, top management should embrace life-long programs to educate employees and keep them up to date.

Crosby contends that these fourteen guidelines should be the cornerstones of any quality upgrade program in the organization. He argues that by putting them into effect, high quality would be guaranteed throughout the different departments. He also maintains that the management should embrace change and work towards improving the quality system with clearly defined procedures and achievable objectives. He perceives the employees' performance as a reflection of the management's attitudes and policy. For this reason, he recommends the execution of his zero effects approach to help detect and overcome quality defects more efficiently. For Crosby, quality improvement is an ongoing process that involves all members and levels of an organization. Crosby's quality improvement approach is quite distinct from those of Deming and Juran in that it emphasizes human resources contributions and

organization orientation to quality enhancement rather than statistical tools as monitoring systems of quality that Deming and Juran stress.

2.5 Karou Ishikawa

Japan benefited greatly from the visits and lectures of the three American quality gurus Deming, Juran, and Feigenbaum. Indeed, Japanese quality experts took an excellent grasp of the theoretical and empirical insight related to quality management and shaped it to suit their culture's specificities. In this respect, Ishikawa (1989) was chiefly influenced by American philosophy when developing a personalized quality system that could apply to different industrial business contexts.

Ishikawa (1989) perceived the Japanese version of quality, Company Wide Quality Control (CWQC) as a crucial six-step process to achieve quality control. These were development, design, producing, marketing, servicing, and maximized profitability. Ishikawa considered that the Japanese past quality control was exuberantly based on statistical tools, which resulted in a general depreciation and rejection of quality control. Thus, Ishikawa's objective was to combine the different quality gurus' approaches and induce employees and workers to contribute to their implementation using simplified procedures and standards.

In all, the first philosophical underpinning associates quality to statistical measures and instruments as required methods to quantify and monitor quality. The second school of thought establishes a direct link between the quality system and management commitment and attitudes towards the internal and external stakeholders. Deming (1986) creates a fourteen-step guideline to quality implementation. He vocalizes the employees' contribution to the building and consolidation of an effective quality system. He highlights the crucial role of the leadership in inducing subordinates to embrace and put into effect their quality visions. It is noteworthy that Deming conceives quality in terms of quantitative and statistical instruments. While he strongly advocates his approach as the most efficient way to guarantee strict quality implementation, it will be subject to severe criticism regarding its exaggerated focus on standardization. Juran (1974) belongs to the second school of thought that advocates the central role of the managers' attitudes and relationships with customers and suppliers in fostering quality. In this regard, he considers the management's full engagement and commitment as crucial driver components to a reliable quality system. Crosby (1984) relates quality implementation to some essential institutional constituents such as cost-effectiveness (profitability) and continuous training and education. He also accentuates organization-wide motivation as a booster of quality at different departments within the institution. Feigenbaum (1986) follows in Juran's tracks and emphasizes

the noticeable impact that a well-crafted management process can have on customer needs' satisfaction. He also follows suit of Deming's roadmap and comes up with 14-step standards for quality improvement. Ishikawa's (1989) remarkable contribution to the quality improvement in Japan brings together statistical tools and management handling of human resources and different stakeholders to ensure and upgrade quality.

Meanwhile, the common point between these five approaches lies in their recognition and ascription of the low or high-quality performance to the management and the system. They articulate the role of the top management in creating an organizational culture that embraces and implement quality. This new perspective avoids blaming employees or workers who cannot bring change to the system by themselves. That is to say, if the organization has a sound quality system that is managed and supervised by committed management, employees at different levels and departments, and the reverse would achieve high quality is also true. Organizations should adopt life-long quality policies as quality is considered an ongoing process. Also, they agree upon the idea that any effective quality scheme should deploy organization-wide commitment and collaboration. Finally, human resources' intellectual and professional development should be among the leaders' top priorities.

3 Total Quality Management Integration and Application in Higher Education

The integration of total quality management into the exclusive world of education took place during the 1980s. Borrowed from the business and industrial fields, it has shaped the concepts of quality education and quality management in the tertiary industry. It has gained credibility and fame since its first implementation in educational institutions throughout the world (mainly in Japan, the USA, and Europe). According to Schargel (1996), Total Quality Management has gone through three transitional periods:

- Deming's initiation of the fourteen guidelines to quality improvement
- the American industrial firms and businesses adoption of TQM
- the integration of TQM in the field of education

The extensive implementation of TQM in higher education dates back to the 1990s and 2000s due to the persistent financial and competition issues rather than a willingness to upgrade quality in education. Therefore, the augmenting fees that students paid, the scarcity of the financial resources, and scholarships' selectivity were crucial drivers to request higher quality and excellence in education (Hwarng & Teo, 2001). Indeed, investing one's savings in higher education begets an immediate expectation of the educational process's maximum quality and

administrative services. Hence, the businesslike model of investment was implemented in the world of education.

Throughout the vast literature on quality management theories, TQM has been designated the most effective and up-to-date approach to achieve quality in higher education. Indeed, the literature review consolidates the conviction that the implementation of total quality management is no longer a decision left to the universities' discretion. It has instead become an imperative owing to the marketplace growing demand for more specialized and trained experts and workforce. Other reasons include the unprecedented advancement in technology, the increasingly furious rivalry between the private and public sectors, universities' accountability to different stakeholders regarding financial funding and the quality of the pedagogical process, and the generous governmental funds allocated to the reputedly effective institutions. What is more, the new contractual recruitment policies based on performance and outcome, and the international recognitions and rankings of universities, are pushing factors to implement TQM. All these factors constitute both challenges and competitive advantages opportunities for the universities applying TQM principles.

The implementation of total quality management in higher education has been fostered by the universal application of its financial, academic, and administrative aspects. In this regard, Entner (1993) accounts for the motives behind the implementation of TQM in higher education and comes up with two primary causes: the decreasing resources and the growing public demand for accountability. Peak (1995) sheds light on the benefits of TQM implementation in HEIs and lists many advantages: the upgrade of the learning-teaching processes, the creation of motivating educational settings, curricula enhancement, increasing training services, and controlling costs. In the same vein, Ossaeso-Asare & Longbottom (2002) build their TQM model in higher education upon "enabler" criteria, which serve to upgrade performance and achieve excellence. Therefore, they point up leadership, policy and strategy, people management (human resources and administration), resources (including financial resources), and partnerships and processes (including academic/ pedagogical methods). Furthermore, Murgatroyd & Morgan (1993) propose a TQM implementation model at schools and universities based on three major constituents. These are building mutual trustiness between educational institutions and different stakeholders (students, parents, etc.), total administration commitment to quality achievement through effective leadership, and an efficiently applied process of empowering everyone in institutions. Indeed, a critical factor in TQM success is the explicit engagement of leaders in executing and monitoring different stages and aspects related to its application. Top management should be sold on total quality management to ensure the

effective and successful implementation of its requirements and principles. Moreover, Spanbauer (1992) determines three TQM applications in community colleges: financial support, admissions and registrations, and employee performance. Meanwhile, Mukherjee & Singh (1993) reach a conclusion that supports the need for strong leadership that implements adequate and comprehensive management to achieve excellence in higher education:

"Evidence points to institutions espousing a total or comprehensive approach where academic, management, administrative, and technical support staff development are viewed within a facilitating infrastructure." (p. 60.)

Combining organizational, administrative, and human resources factors, together with appropriate training and commitment to executing the quality vision, will undoubtedly lead to high-performance and excellence. Similarly, Gregory (1996) offers a higher education leadership model, which comprises four dimensions: symbolic, political, managerial, and academic roles to handle change. Likewise, Keller (2006) highlights three administrative functions that the university administrators will perform in the future. He specifies the management of change, controlling finance, and the quality of service as their key responsibilities. This denotes making extra efforts on the part of administrators to find additional revenues and funds, dealing with technological, pedagogical, and administrative novelties and changes, and instituting accountability and upgrading quality related to academic issues (teaching, learning, facilities, curricula, assessment, etc.).

In all, based on the above review of TQM applications in HE, the perception of TQM as a strategic management system which integrates the financial, administrative (governance), and academic aspects to upgrade education and related services in higher education is the conceptual framework of this section of the dissertation.

4 Quality Pursuit throughout Moroccan National Reforms

The official search for quality in Moroccan higher education began with the first endeavour to reform this sector in 1990. Subsequently, Moroccan authorities to improve the notoriously degrading education at all Moroccan higher education system levels have initiated a series of reforms. In this regard, the 2003/2004 reform was adopted to put into effect a new educational organization. The king launched another prominent call for radical change in 2007 and initiated the Emergency Plan to mend the persistent deficiencies in the educational system. In 2008, the Higher Council of Education issued an assessment report that traced back the principal accomplishments. One year later, the Ministry of Higher Education officially endorsed the contingency plan to establish and institute quality within management.

5 Application of Total Quality Management in Moroccan Higher Education

Quality achievement in Moroccan higher education is extensively accounted for in the National Chart for Education and Formation. Quality management is chiefly articulated in the statute No 01-00 of May 2000 on the Organization of Tertiary Education. This law is enacted to suit perfectly the requirements of Total Quality Management. It highlights and targets three significant aspects of TQM applications in higher education, namely the academic (pedagogic and instructional issues), financial (budgeting, accounting, and funding), and administrative (governance) reforms (Articles 4 and 5 of statute 01-00).

The academic side of the reform underlies the quality of the pedagogical methods and curricula and the degrees obtained at different cycles (Bachelor, Master, and Doctoral cycles). Therefore, the new modularized system, semesters, and cycles are adapted to meet modern education's prerequisites. Furthermore, academic partnerships between the private and public sectors are seen as central components to upgrade quality in Moroccan universities.

Concerning the financial aspects of the reform, they have been oriented towards finding and allocating additional funds and resources away from the conventional sources. These typically consist of the investment and operating budgets that the state provides the universities with, student enrollment fees, and revenue resulting from the institutions' operations and assets. Also, in terms of accounting, it accounts for the absence of an independent system within universities, which still count on dashboards to provide general and analytical accounting (Bencheikh & Ellabbadi, 2013).

In terms of the administrative reform, it seeks to decentralize decision-making and modify the concept of governance. It also aims to make the administration more resilient and human resources more competent and committed to improving its service.

The magic word related to these three TQM applications in Moroccan HE is "autonomy." Indeed, the reform's essence lies in decentralizing decision-making at the levels of governance, academic development (e.g., curricula development and adoption), and setting up independent financial and accounting management. The ultimate objective is to ensure quality control based on autonomous governance and administration. In the meantime, these reforms, as inspiring and optimistic as they may seem to be, generate some concerns such as transparency, evaluation, accountability, rationalization, etc. As important as they are, these issues are beyond the scope of study of this paper.

Bencheikh & Elabbadi (2013) investigate the management control system (MCS) in the Moroccan universities in light of the national reform and agree with the two themes introduced

by the emergency plan: autonomy and contracting. Their study focuses on the extent to which Moroccan universities can meet the requirements quality, efficiency, and optimization to achieve high performance in management, student services, empowering everyone, and managerial transparency. For this reason, the researchers survey seven Moroccan state universities (Mohammed V University, Agdal University, Mohammed Ben Abdellah University, University Hassan I, Cadi Ayaad University, Ibn Zuhur University, and University Abdelmalek Essaàddi) in addition to the privately managed Al Akhawayn University to account for four prime themes. These are autonomy, contracting and organization, management control and information systems, the role of different actors, and the interlocutor (p. 111). The results of this research confirm the absence of well-defined accounting systems within these universities. They substitute the accounting platforms with dashboards as the preferred premises of management control in Moroccan higher education. The contribution of Bencheikh and Elabbadi's research findings to the current paper does not only lie in their investigation of the effect of the national reform on the Moroccan universities from a managerial perspective but also the examination of a major TQM supportive organizational infrastructure such as Management Control System (Ittner & Larcker, 1995).

It is explicitly recognized throughout the reforms undertaken in the Moroccan context that new frameworks should be introduced in universities to ensure autonomy. Policymakers have been aware of the necessity to incorporate new financial, academic, and governance mechanisms to institute and consolidate higher education independence.

6 Governance:

The broad descriptions of governance that provide macro- and micromanagement accounts related to higher education are frequent throughout the literature. Most of them highlight the external and internal intervening bodies or forces contributing to varying degrees to tertiary education governance. Therefore, the OECD (2008) has provided an all-inclusive definition of the concept of governance:

"Governance encompasses the structures, relationships and processes through which, at both, national and institutional levels, policies for tertiary education are developed, implemented and reviewed. Governance comprises a complex web including the legislative framework, the characteristics of the institutions and how they relate to the whole system, how money is allocated to institutions and how they are accountable for

the way it is spent, as well as less formal structures and relationships which steer and influence behaviors" (p.68).

At the national level, external governance is clearly in the hand of governmental institutions that draw the macro policies and strategic orientations for national education. Internal governance, on the other hand, denotes the interior and centralized management of universities. This intra-institutional governance reflects the concept of self-governance as decision-making takes place within educational institutions by internally elected boards. In this regard, Gayle et al., (2003) conceive university governance in terms of decision-making processes and structures at the macro-level of authority that concern issues related to external and internal stakeholders in universities. Marginson & Considine (2000) further stressed these issues:

"Governance is concerned with the determination of values inside universities, their systems of decision-making and resource allocation, their mission and purposes, the patterns of authority and hierarchy, and the relationship of universities as institutions to the different academic worlds within and the worlds of government, business and communities, without." (p.7).

This depiction of governance reflects Marginson and Considine's perception of the expanding ground of external contributors or stakeholders who intervene in universities' governing. These involve the various non-governmental bodies, state, and outside entities that participate in the handling and representation of their interests within universities. Governance is about the inner values, the hierarchy of authority, decision-making, and the external influence and interconnection with different stakeholders. The intricate relationship between the 'inner' and 'outer' governance at the level of decision-making, hierarchy, and governance structures is further explained by Clark (1983), who maintains that the external or 'outer ring' structures stand for the effect of collaboration mechanisms that the state and the market have on universities. Meanwhile, the internal or 'inner ring' structures are integrated into the governing bodies (university councils, academic staff, administrators, deans, etc.) that self-govern their universities. In the same vein, Davidovitch (2015) states that higher education governance is embodied in the ability of the administrative and governance structures to make decisions. Governance in tertiary education is related to the appropriation of managerial and governing authorities at both the interior and exterior levels. The combination of these dimensions of decision-making gives rise to the model of governance prevailing in each country.

7 Governance Models

Two major governance typologies stand out throughout the literature: Clark's (1983) "triangle of coordination" model, which comprises the 'state control,' market-oriented, and 'self-rule' modes of governance, and Van Vught's (1989) governmental steering typology, which advocates a necessary transition from 'state-control' to 'state-supervision' mode of governance.

Clark's (1983) pioneer model conceives governance systems in higher education as consisting of three dimensions of control and coordination. The first component refers to the state's power and authority; the second influence is exercised by the free market, which constitutes the university's external environment; the last driving force is incorporated in the academic management or self-regulation undertaken by internal professional 'oligarchies.' These three forces shape the relationship between tertiary education and the state in all countries. Thus, Clark's famous model is still relevant to the model of governance prevailing in international universities. In the meantime, Clark's assortment is well-suited to this paper's conceptual framework as the state control dimension is congruent with its opposite dimension, governance autonomy. In addition, the market influence parallels financial independence associated with raising extra funds, investing, and carrying out business-like management. Additionally, the administrative and academic 'oligarchy' is relevant to administrative and academic autonomy highlighted in this dissertation. This division of power influence leads to the assortment of university governance into three modes: the state control model, the self-rule model, and the market-oriented model (Clark, 1983).

- **The state control model:** Clark traced back the origins of the state control model or the 'continental model' to the higher education foundation in Europe. France was particularly emphasized as having significant oversight over its education system as it established highly centralized administrative systems and standardized qualifications across the country. Consequently, the state control model of governance was transplanted in the French colonies, "Most African universities are recent European transplants, founded during the terminal colonial period" (Thompson, 1977; 282). Therefore, being a former French colony, Morocco inherited the state control model of university governance. This model is built upon the state's regulatory interference and the massive centralization of bureaucracy as embodied by the Ministry of Higher Education, Scientific Research, and Professional Training, which monitors all aspects of tertiary education in Morocco. Autonomy, in this sense, becomes relative and limited as the state control of the internal governance of universities, especially quality

assurance and effectiveness (Dobbins et al., 2011). This internal directing can be manifested in the overseeing of educational curricula and outcomes, fixing tuitions and fees related to students' admission, regulatory interventions that interfere directly with staffing and examinations. State regulation fosters the traditional top-down governance method, which establishes the state's absolute control of every aspect of higher education. This type of state immediate governance and control received fierce criticism and was considered the leading cause of the tertiary education crisis. What is more, some persistent problems resulting from the inadequate state management of higher education surfaced during the last decades, affecting quality education. These are crowded auditoriums, inappropriate recruitment, the decline of facilities, scarcity of library resources and materials. These problems reflect the managerial and academic deficiencies associated with the slow and ineffective centralized management. Thus, it is widely reported that centralization, hierarchical management, and intricate bureaucracy negatively affect the running of higher education.

Excessive hierarchy and complex bureaucracy at the level of decision-making characterize the state control model. The state has the final call concerning the curricula' assignment and strategic objectives to be attained by universities. By implementing this model, the state oversees all aspects related to the running of tertiary education. It also monitors quality with the help of governing bodies and academic procedures. The long arm of the state reaches the financial governance as it controls the universities' budgets and funds, of which it is the number one provider. Furthermore, human resources management is entirely monopolized by the state as the appointment of high-ranking executives (presidents, dean, etc.) and the recruitment of regular administrative and educational staff fall within its jurisdiction. Thus, the state control model treats higher education as public institutions belonging to the public sector and run almost in the same approach as the public administration where hierarchy, rules, and bureaucracy prevail.

- **The Market-Oriented Model:** this type of governance is derived from business management and entrepreneurialism (Shattock, 2003). It adopts a business-like approach to managing universities in which the state does not interfere in the internal schemes and goals. It is based on the universities having self-directed autonomy to explore various funding sources, building partnerships with external entities, and adopting strategic orientation towards the free market. The most significant shift in this model lies in altering the traditional management (state control model) with more modern and resilient managerial methods oriented to the market and self-governance.

This model postulates that by running universities as enterprises, accreditation bodies will ensure quality assurance, and therefore, high-quality education will be guaranteed. An independent decision-making process that takes place at the level of university management characterizes this model. Another distinctive feature of this model is that both the state and the university carry out quality assurance. This implies that while the state's governing bodies are in charge of handling the evaluation and accreditation processes, universities take the duty of the academic outcome. These combined efforts to achieve high-quality products and procedures provide a vast margin of autonomy to universities. In terms of financing, universities have access to many financial sources such as tuition, fees, grants, partnerships, and state funding. This diversification guarantees a substantial budgetary autonomy.

• **The Self-Rule Model:** this model stresses the role that academic professionals play as decision-makers at the learning and teaching processes. They enjoy the freedom to decide on the internal goals they perceive to be appropriate with their institution. Thus academic self-governance aims at self-steering of the scientific community and the pursuit of the research. Olsen (2007) rejects the notion, which advocates that universities should serve the external agenda of the state, and he argues that universities should possess their objectives. In contrast with the state control model, direct financial control should not be exercised over universities through regulations. The state is in charge of setting the general regulations for the universities (Dobbins & Knill, 2009, p. 408). Self-governance denotes a high autonomy and decentralized decision-making process. Therefore, academic self-governance highlights the managerial roles that professional academics and communities can have and the regular responsibilities within universities. These roles are manifest in recruiting personnel and making decisions related to some internal affairs, such as determining funding bodies and partnerships. Academic self-governance denotes full power in the hand of academia. Quality control is an internal affair that depends on the scientific community decisions to upgrade the quality of the research and publications. The state provides broad regulations and guidelines and does not interfere by any means in the academic output. Total financial autonomy is a hallmark of this model, as the state has nothing to do with the university budget. Finally, the executives in charge of governance and managing universities are elected by the professoriate.

Clark's (1983) model inspired many researchers and scholars to conceptualize other higher education governance patterns. In this regard, Van Vught's (1989) abridgment of Clark's genuine paradigm stands out as an excellent pattern among the various conceptualizations. This typology takes rather an intermediate position between the three types developed by Clark.

Van Vught's (1989) governmental steering typology suggests a transition from the state-dominated governance to the state supervisory mode of management. He remolds Clark's triangle model into two types of 'state control' and 'state supervising.' He starts from the conviction that the deteriorating situation of higher education is mainly due to the staggering influence of the state. He further claims that universities would perform better if they were given enough autonomy to govern themselves. He argues that this shift from the traditional model to a more evolved form of guidance on the part of the state requires giving academic professionals and university executives a broader self-regulatory power. Autonomy, in this sense, can be perceived as the equilibrium between larger freedom of decision-making and management in the hand of universities and global methods of steering and regulating tertiary education by the state.

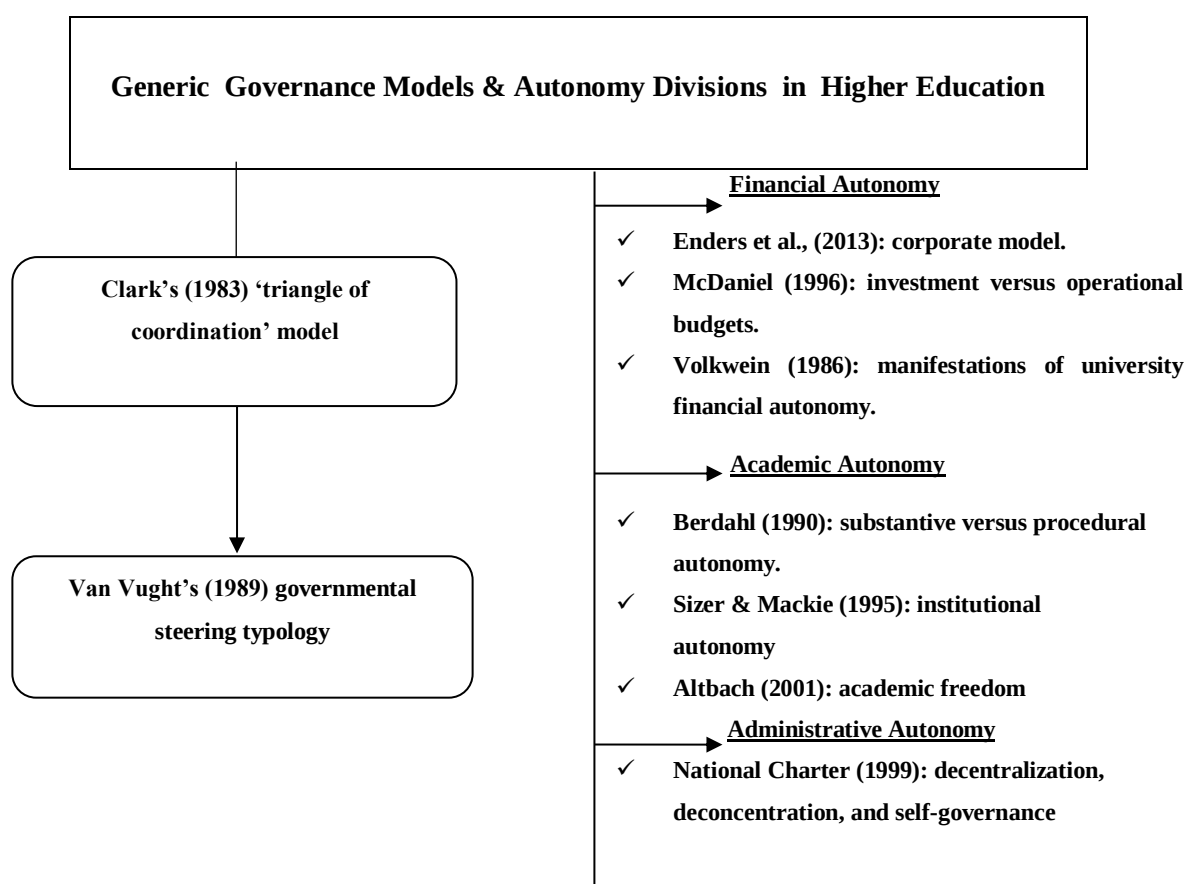


Figure 10: Generic Governance Models & Autonomy Divisions in Higher Education

In Morocco, the reform can be seen as an orientation towards implementing the supervisory model in the long run. A shift from direct and tight monitoring of tertiary education into a remote and broader form of regulating and organization would be a big step towards instituting autonomy and establishing the supervisory mode of governance.

8 Higher Education Governance in Morocco:

Higher education in Morocco in the aftermath of the reforms can be described as alternating between the two extremes: state control and self-rule model. This intermediate form of governance is characterized by the intermingling of state regulation and university self-governance. This hybrid status of Moroccan tertiary education can further be explicated by the broader financial, academic, and administrative freedoms that have been granted to the universities while maintaining the traditional supervisory and regulatory roles of the state. Nevertheless, the coexistence between the direct state regulation and the universities' self-rule or self-governance reflects the intricate relationship between internal governance structures and external governing bodies. On that account, this paper adopts a more pertinent account of governance in tertiary education (than those provided by broader descriptions), which entails the formal structuring, organization, and management of universities both at the internal and external perspectives. To put it differently, it probes the intrinsic configuration and governing frameworks and the extrinsic organizations, authorities, and regulating bodies that interfere with the decision-making process and exert a variety of influences on the management of higher educational institutions in Morocco. By shedding light on the external and internal parties influencing university governance, this paper aims to uncover the hindrances and potentials that affect higher education quality in the national context.

9 Governance and Internal decision-making structures in Moroccan HEIs:

University governance reflects the process and power related to decision-making, bureaucratic structures, and managerial bodies that interfere directly in higher educational institutions' internal academic, administrative, and financial proceedings. This seems to be adequate with De Boer's (2002) description of governance structures as a "set of rules concerning authority and power related to the performance of a university's activities directed towards a set of common goals" (p.44). Meanwhile, the complicated relationship between the internal structures is highlighted by Smith (1990), who distinguishes between three academic governance structures: administrative, hierarchy, and academic structures. According to Smith, the organizational hierarchy stands for the top-down authority model that governs the lowest academic staff's communication process to the highest university executive. Concerning the educational board, communication and decision-making occur at the vice-chancellor (vice-president). This means that middle executives are not included in this phase of management.

Academic Hierarchy describes the interaction between the network of individuals and teams of academics with the leadership.

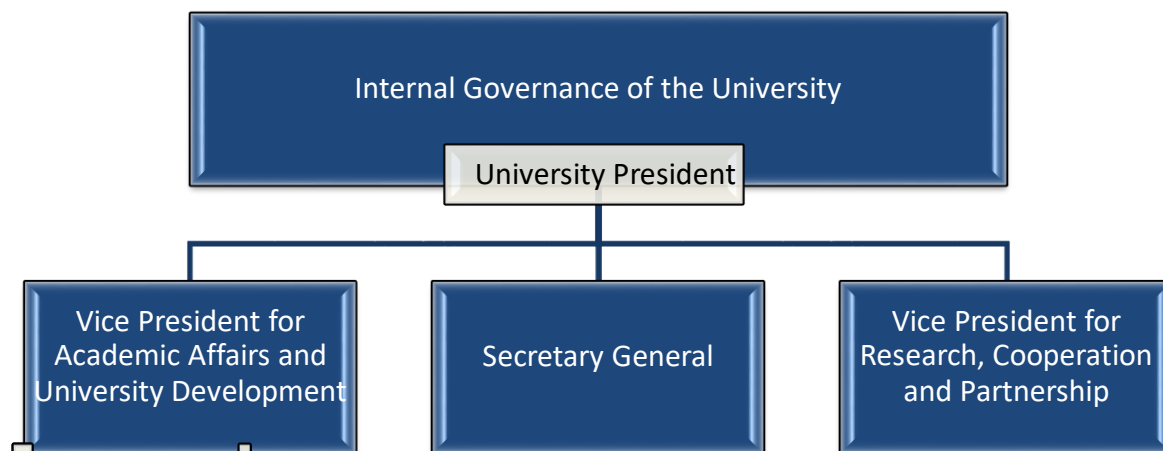


Figure 11: Organigram of University Presidency Hierarchy in Morocco. Based on the current research

Regarding the internal structure of higher education in Morocco, the legislator has provided the legal and administrative frameworks within which universities should operate. In this respect, the most prominent legislative frame of reference is Dahir No.1-00-199 of 19 May 2000, which structures and organizes the public administration, including tertiary education. This referential framework comprises law 01-00, which treats universities as public organizations with legal personality and financial and administrative independence. Accordingly, the senior management and the highest executives of the Moroccan universities are the presidents appointed by a royal decree. Thus, university presidents and deans of different faculties are political positions appointed by the kingdom's highest authority for four years after an expert's endorsement.

Presidents have the authority to form and select their vice presidents to assist them in various managerial and academic activities. Meanwhile, the presidents do not interfere in the appointment of the deans. General councils carry out the management of the Moroccan university. Universities have their general councils, which are the highest executive boards in charge of managerial decisions related to academic quality and planning, financial and fiduciary matters, and pedagogical affairs related to teaching, scientific research, academic admissions, and assessment. General Councils include university executives, namely the university presidents and the deans of faculties. All universities elect some of their members to take part in these councils while the rest of the representatives are appointed. It is composed of some appointed executives, such as the president of the region, the head of the ulemas council, and

the prefectural board president. These executives represent the official authorities of the state. University students elect their representatives in the general council to contribute to academic decision-making. Other external representatives involve social partners, various organizations, business enterprises, and private higher education members. This council has consultative and advisory roles as it assists the president in making decisions. By being the highest policy-making and governing entity in the university, the general council representational structure is meant to reflect autonomy and freedom at different levels of internal governance.

10 The Administrative Hierarchy and the Type of Management in the Moroccan Public universities:

Despite the comprehensive legislative frameworks that lay down the regulatory and organizational guidelines for all the higher educational institutions in Morocco, the administrative structures vary significantly from an HEI to another. This is quite explicit in Article 24 of the National Charter, which confirms that the university council sets the bureaucratic structures of each higher educational institution, their organization, and the terms of appointment to the various administrative structures on the governing board's suggestion institution. This flexibility in the management accounts for the broader organizational formations throughout different types of institutions. Many factors govern this seemingly autonomous configuration of the HEIs administration. These include the financial budget, size, type of institution, and history and culture. In this regard, Article 32 holds that higher education institutions can be created as faculties, schools, institutes, or centers that can be organized in departments corresponding to disciplines and fields of study and research of each one. Therefore, any endeavor to come up with a description of a general administration structure will fall short of reflecting the existing administrative architecture in all these types of institutions. Meanwhile, the following organigram provides a crystal clear depiction of the type of governance currently prevailing in the Moroccan context. Thus, despite the increasing autonomy that the faculty's top executives have acquired throughout the successive reforms, the top-down management model still predominates the decision-making and communication processes from the highest institution executives to the lowest administrative staff. The system is exceptionally hierarchical with an autocratic type of leadership. This type of administration is characterized by the centralized authority in which all decisions (financial, academic, and administrative) are in the dean and vice-deans' hands. This hierarchical configuration reflects the high formality between top executives and departments, inter-departmental communication, and department-individual employee interaction.

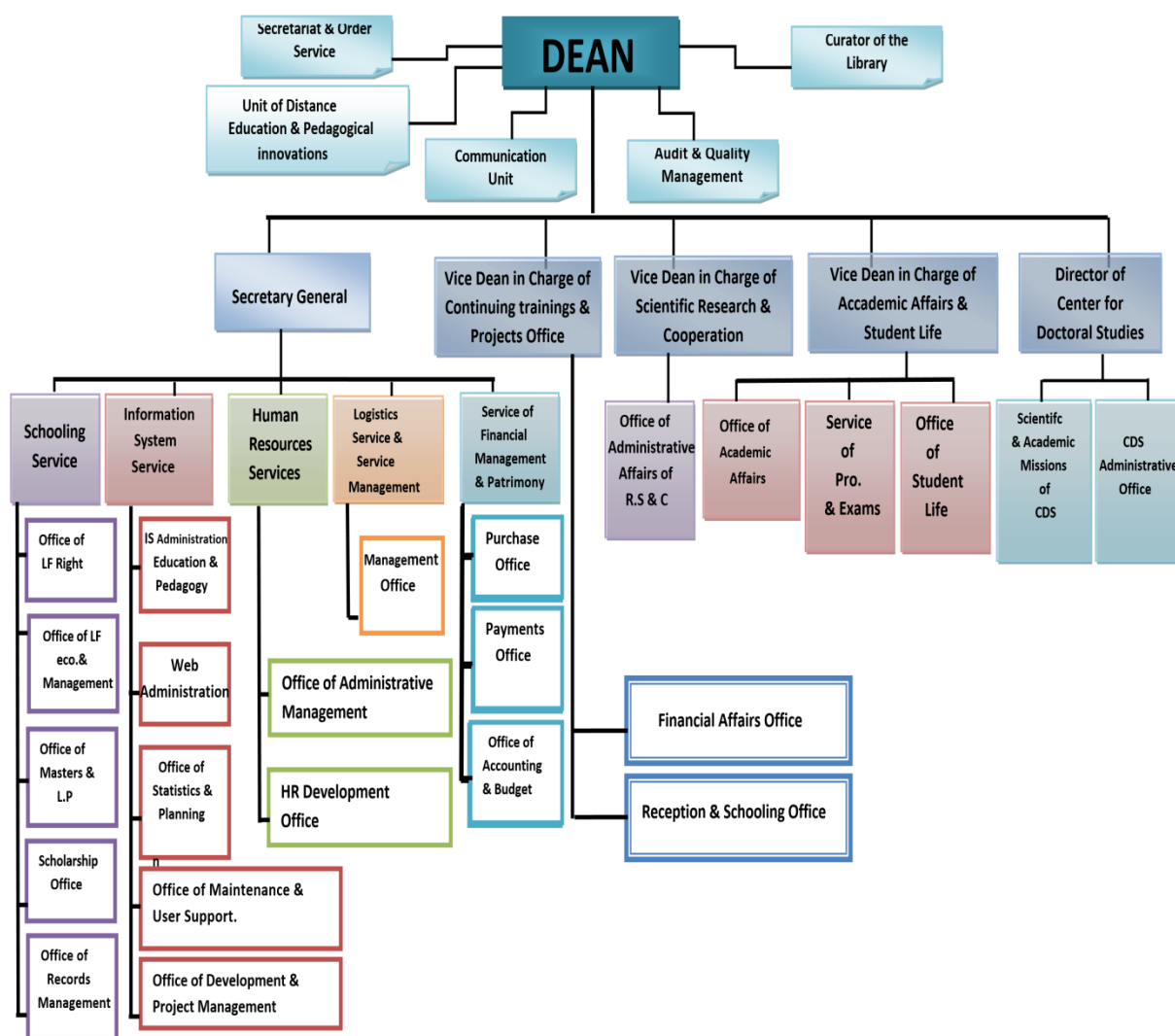


Figure 12: Organigram of the Administrative Hierarchy in the Moroccan Public universities. Translated and adapted from the official website of FSJES Ain Chock Faculty of Economic and Social Legal Sciences. University Hassan II Casablanca. (2018).

By way of illustration of this pattern of the centralized power, departments (services) do not possess independent running budgets and need the superior's approval for any purchases or expenditures. In the meantime, according to Aboussalah (2016), an ongoing restructuring of the administration is currently taking place in public universities. He contends that the reorganization of university governance is occurring at the level of three primary applications. These are financial and accounting management, management of pedagogical affairs, and technical research information system. The restructuring of the Moroccan universities to achieve internal decentralization and deconcentration requires implementing more evolved legal and institutional frameworks and effective delegation of responsibility and authority. The decentralization of authority to the 'basic units' and the set up of a straightforward system of accountability in the organization should be implemented.

On the whole, the Moroccan pattern of the internal governance is in a transitional stage in which the top management of the university (the president) and the senior executives of the HEIs (the deans) have been granted broader authorities to make financial, academic, and administrative decisions. Whereas, hierarchical/ autocratic styles of management still govern the internal organizational structures. Communication and procedures have to undergo a top-down process, and the delegation of responsibilities is scaled down to the narrow class of executives.

11 Quality Assurance and External Control Structures of Moroccan HEIs:

Morocco developed a comprehensive system of quality assurance throughout the multiple reforms of higher education. Since 1999, the reform process was directed at achieving quality at different levels of the educational system. Thus, the National Charter for Education and Training addressed issues associated with the quantity and quality hindrances and achievements (Article 157). Subsequently, the promulgation of the statute 01-00 in 2000 provided straightforward measures to reform the major issues such as quality assurance and governance (Articles 77 and 78).

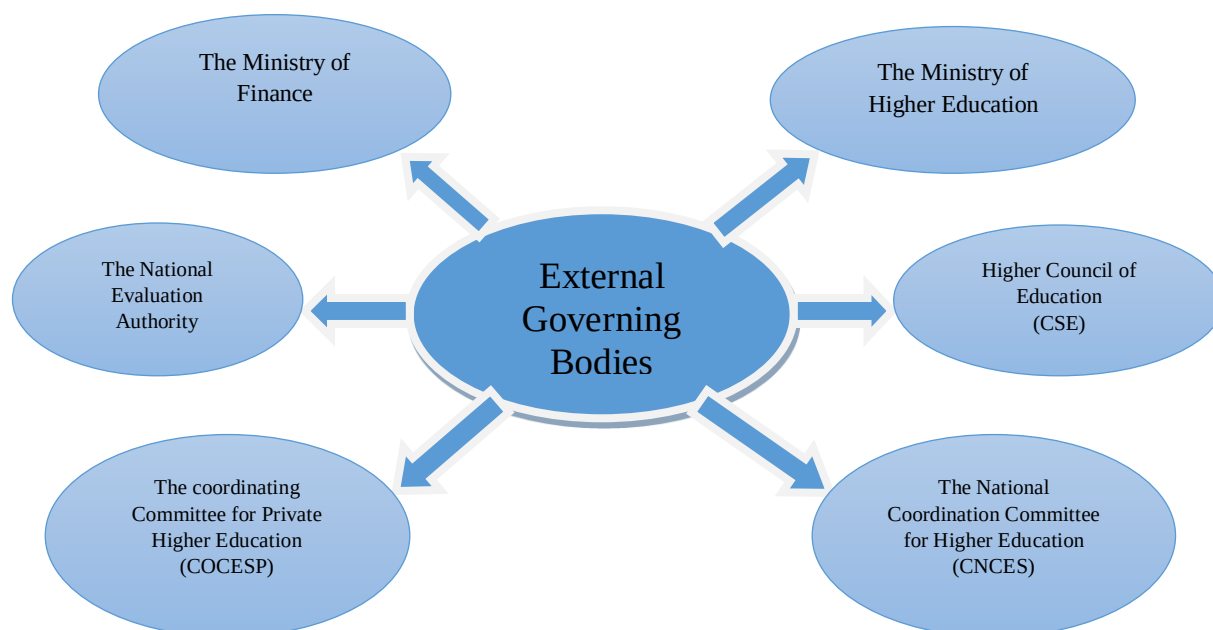


Figure 13: External Control Structures of Moroccan HEIs.

Subsequently, the Strategic Vision (2015-2030) placed quality assurance at the heart of the reform. The external structures or bodies in charge of assessing, evaluating, and accrediting higher education institutions and programs were the outcome of the consecutive reforms.

The figure 13 above illustrates the six central external authorities and bodies that contribute to the regulation and institutionalization of quality assurance across Moroccan

universities. The Ministry of Higher Education, Scientific Research, and Professional Training is the official authority with the overall responsibility to put into effect the regulatory framework related to the implementation of the quality assurance strategies. The law of 69-00 integral to Dahir No. 1-03-195 of 11 November 2003 underlying the financial control of the public enterprises and organizations has assigned auditing and inspection of the universities' accounting to public inspectors. Thus, the budgeting and allocation of resources and funding are controlled by the state. The Ministry of Higher Education coordinates with the Ministry of Finance to distribute the financial allotments among universities according to some predetermined criteria such as the aggregate number of students, specializations, and realization of objectives. The Higher Council for Education was founded in 2006 to provide advisory power vis-à-vis the national issues related to training and education. Furthermore, this constitutional entity has the duty of evaluating the educational institutions and the educational system as a whole. For the purpose of achieving these objectives, the legislator has created the National Evaluation Authority to help the Higher Council in auditing and assessing the higher educational system. This independent body has the mission of carrying out overall, sectorial, and sectional assessments. The National Coordination Committee for Higher Education is authorized to recommend the establishment of new universities and the creation of other public or private HEIs throughout the kingdom. It gives insight concerning the accreditation of the educational programs and provides the pedagogical framework that paves the way for curricula' approval. The Coordinating Committee for Private Higher Education is in charge of the private HEIs in suggesting the creation of new private higher educational institutions, overseeing the expansion and development of this sector, and ensuring quality within these institutions. Moreover, the foundation of the National Agency for Quality Assurance in Higher Education and Scientific Research in 2014 was another step forward to achieve quality within national universities. While its primary mission is to assess the various institutions, programs, and scientific research cooperation schemes, supervising the accreditation process is another primary goal of this external body. The upgrade of the accreditation process is another leverage of quality education in Morocco. Therefore, the law 01-00 subjects educational programs to a mandatory accreditation. This process entails the endorsement and validation of masters and doctoral programs by the National Accreditation and Evaluation Committee (CNAE), the responsible body for providing new accreditations or granting renewal for the existing ones predetermined guidelines and measures. External structures are established to ensure quality assurance of Moroccan higher education. These intrinsic stakeholders give evaluative and advisory support to the Ministry of Higher Education. In all, internal and external governance

bodies are established to achieve high-quality performance at the many facets of educational reforms, namely, financial, administrative, and academic applications which are meant to be in tune with the aspirations of effectiveness and excellence underlying the successive schemes to upgrade education.

12 Conceptual Framework and Hypotheses for the Effect of Total Quality Management on Organizational Performance:

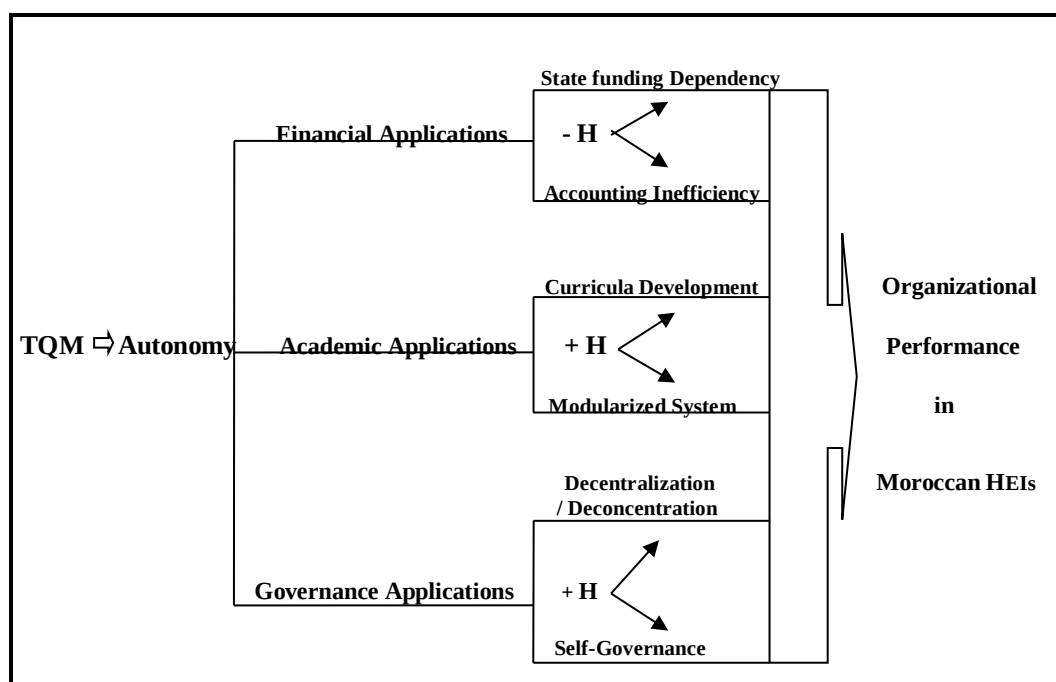


Figure 14: Conceptual model underlying the correlation between TQM and organizational performance.

The generic division of higher education autonomy into financial, administrative, and academic applications, within the underlying context of TQM implementation, has been extensively accounted for throughout the related literature. For instance, Moses (2007) perceives institutional autonomy as a changing process that comprises employees, students, teaching, pedagogical/academic measure, financial management, and governance. McDaniel (1996) examines the levels of autonomy from financial, managerial, educational, and human resources perspectives. He sees financial independence in terms of the universities' ability to separate investment budgets and operational budgets.

Fisher (1988) probes the personnel, students, management, finance, and academic aspects of autonomy; Volkwein & Malik (1997) study the same characteristics of autonomy as

McDaniel and Fisher. Frazer (1997) considers self-governance, financial independence, and academic freedom as the most crucial attributes that contribute directly to an educational institution's autonomy. Most of the descriptions of university autonomy focus on the extent of independence and self-steer that universities enjoy.

Accordingly, this paper advances the assumption that implementing these three aspects (governance, financial, and academic applications) as part of TQM will result in high performance in Moroccan higher education. This can be explicated by the optimization of institutional management and autonomy.

12.1 Total Quality Management and Organizational Performance:

12.1.1 Financial Autonomy:

Enders et al., (2013) perceive the universities' financial autonomy in terms of the extent of their reliance on state funding and their capacity to raise extra resources and revenues. They argue that the corporate model of financial management (setting tuition fees, taking on loans, investing, etc.) applies to educational institutions. Cazenave (1992) states that a substantial factor of higher education autonomy lies in how universities can manage the available budgets independently. Financial independence refers to finding resources, expenditures, resource allocation, and budgetary management of an educational institution. These resources can be provided by the state or other external funding entities. Sheehan (1997) provides a comprehensive description of financial autonomy, which entails the university's total independence to decide on financial matters without government interference or other funding entities. He further specifies two primary abilities as being crucial to the universities. These are the ability to raise public funds and the capacity to allocate them according to their needs and priorities. In this sense, a defining characteristic that optimizes higher education autonomy lies in the institution's freedom to look for and obtain additional funds aside from the traditional resources guaranteed by the state.

Volkwein (1986) determines nine manifestations of financial autonomy. They constitute the major prerequisites for the independent financial management of the university. These are free budgeting, flexible transfer of funds, the authority to monitor tuition fees, the responsibility to manage revenues, well-defined internal standards for staffing, free pre-audit of the costs, self-established rules for year-end balances, and the capacity to pay off employees and expenditures related to additional purchases. In addition to government funding and private resources, other aspects of financial autonomy are embodied in the institution's ability to handle

its assets, fees and tuitions, buildings, lands, facilities, loans, etc. These would allow the institution to generate more income and allocate more resources.

In the meantime, it seems very intricate to strike a balance between receiving funds from the government and managing them independently from the central authority. The essence of financial independence lies in this seemingly complicated equation. For no institution can be referred to as being autonomous without having the power to decide on and govern its financial resources. This leads to discussing the margin of freedom that universities enjoy as part of the decentralization process. Menéndez-Weidman (2001) defines educational decentralization as the "transfer of power from the state to elected bodies of regions and departments (and the) devolution of power [...] to appointed rectors, elected local authorities and head teachers" (P, 77). The headteachers' role is congruent with the essence of the reform in Morocco as it seeks to shift from the state oversight to self-governance of universities. Autonomy, in this sense, excludes any external interference from the state or other entities in the management of financial issues and decisions within universities. The chief governmental tools to control universities are embodied in the arsenal of legislation that organizes and monitors tertiary education, monetary funds and aids, and university executives' political appointments. Furthermore, the state's pre-determined budgetary posts and recruitment standards tightly control the hiring of teachers and administrative staff. According to the universities' needs and budgets, self-governance includes the freedom to recruit and contract with teachers and administrative staff. For this reason, financial management requires governing boards that exercise internal governance and make financial decisions related to allocating resources and preparing financial plans. Therefore, the existence of elected or selected councils is an integral element for financial autonomy (Steiss, 1989). Financial management also requires well-defined accounting bodies within universities. These can take the form of a budget unit, a reporting unit, a financial accounting unit, or a responsibility center (Jones & Pendlebury, 1992). The major duties of these accounting bodies are the preparation of the financial statements (Balance Sheet, Income statement, Cash Flow Statement, Equity Statement) according to generally accepted accounting principles, the preparation of annual reports, and the maintaining of updated information systems of the earnings and liabilities of the institution. The royal decree Number 330-66 of 21 April 1967 states that the Moroccan universities' financial liabilities lie within the jurisdiction of the public accountants and officers. This means that they are in charge of disbursement, expenditure, cash flow, and income (Article 18 of Law 01-00). In this sense, universities do not have the moral entity that would enable them to order or oversee their income or expenditure. This entails a complete absence of independent and well-defined internal accounting bodies within Moroccan

universities. This fact fosters state control over tertiary education in the kingdom. As a matter of fact, the malfunctioning or absence of accounting bodies in Moroccan universities (Bencheikh & Elabbadi, 2013) would hinder self-governance and, therefore, affect universities' financial autonomy negatively. It is undeniable from the above discussion that a better higher education performance in Morocco is contingent upon more substantial financial independence and reliable internal accounting systems.

12.1.2 Academic Autonomy

Conventionally, autonomy is associated with academic freedom. Tight (1988) describes academic freedom as “the freedom of individual academics to study, teach, research and publish without being subject to or causing undue interference.” (P, 132). This autonomy description focuses on the freedom that individual academics have in carrying out their research or designing their lectures. By so doing, independence becomes closely related to different members of the university. From a broader perspective, institutional autonomy refers to the various components that interfere with freedom at higher education (Sizer & Mackie, 1995). These components are the cornerstones of independence at different levels, namely student selection and submission, staff recruitment, curriculum design and development, and resource allocation (Ashby & Anderson 1966). Indeed, freedom at the level of managing academic issues ensures efficient and customized decisions when choosing an appropriate curriculum, organizing the educational year, setting standards for students' enrollment and submission, and optimizing scientific research. Berdahl (1990), who distinguishes between substantive autonomy and procedural autonomy, makes one apparent division of the concept of autonomy. According to Berdahl, substantive autonomy refers to the institution's ability to set its standards, goals, educational programs. On the other hand, procedural autonomy denotes the practical means and procedures that help put these goals and schedules into practice.

In this sense, it can be noticed that there is an indisputable link between substantive autonomy and academic affairs, and a manifest association between procedural autonomy and administrative matters. Academic freedom directly affects the learning-teaching process as it denotes the liberty of teaching and researching for professors and the privilege of acquiring knowledge and learning for students (Altbach, 2001.p, 206). From the previous discussion, this paper postulates that by having substantive and procedural autonomy, Moroccan universities will be able to freely develop and adopt their curricula, modularized system, semesters, and cycles to satisfy the students' needs meet the requirements of the job market. Consequently, Moroccan universities' performance will be favourably affected by academic independence.

12.1.3 Governance Autonomy

The establishment of a new management model based on decentralization, deconcentration, and self-governance is the cornerstone of achieving high administrative performance in Moroccan universities. Good governance entails an effective decentralized government and independent administrative structures within HEIs. Therefore, The Moroccan pattern of deconcentration is built upon the delegation of responsibilities and decision-making power to the medium authorities (provinces and regions) and local levels (the universities' boards and general councils). Thus, deconcentration denotes a total administrative decentralization. Universities, with the new reforms, are the embodiments of decentralization and deconcentration. Being aware of the centralized system's many dysfunctions, the National Charter on education and training (1999) is quite explicit concerning the necessary change. Thus, it outlines the drastic measures that should be taken to achieve a gradual alteration from the extremely hierarchical mode of governance prevailing in Morocco to a more decentralized and deconcentrated model of governance. Accordingly, the National Charter introduces decentralization and deconcentration in the education sector as vital principles of reforming governance (the National Education Charter. (1999). Lever 15. P., 58). Therefore, the present dissertation links the positive performance of the universities' administrative services with the three elements of management, namely decentralization, deconcentration, and self-governance.

13 Total Quality Management Research Hypotheses:

- **Financial applications** will have a **negative** effect on **Total quality management** implementation in Moroccan higher education.
- **Academic applications** will have a **positive** effect on **Total quality management** implementation in Moroccan higher education.
- **Administrative applications** will have a **positive** effect on **Total quality management** implementation in Moroccan higher education.
- The implementation of **Total quality management** will lead to **higher job satisfaction** among employees.
- The implementation of **Total quality management** will lead to a **higher commitment** of the employees to their organization.

14 Section Summary:

Providing quality education has been a priority of policymakers since the initiation of the reforms in Morocco. This is obvious in the kingdom's macro politics that have been outlined throughout roughly two decades. The crowning achievement is adopting the strategic scheme, which aims at granting advanced autonomy to universities. This advanced gimmick has the prospect of developing internal governance and consolidating the external structures responsible for the oversight and organization of HEIs. This hybrid policy toward higher education management can be conceived as a transitional phase towards less state intervention in running the financial, academic, and administrative affairs of HEIs. Simply put, the realization of a total autonomy requires a radical change from 'state control' to 'state supervision' model of governance in which universities enjoy complete freedom to diversify their financial sources, possess their accounting bodies and systems, and allocate resources according to their needs. Full autonomy denotes freedom of curricula adoption, controlled students' submission, and customized scientific research programs and budgets at the academic level. Concerning administrative autonomy, it entails the universities' ability to employ (hire and fire) the administrative personnel according to their needs, adopt contractual recruitment based on quality performance, and possess sufficient authority to manage administrative services and facilities. Recognizing that with great power comes great responsibility, universities with advanced autonomy become more accountable to different stakeholders. Besides, the requirement of higher quality education becomes a standard rather than a mere request. The measurement of the three TQM applications within Moroccan universities is the primary objective of this dissertation section. Therefore, the conceptual framework proposes assumptions 12 and 13, which presume a positive link between academic and administrative applications and organizational performance, whereas H11 postulates an adverse effect of the financial application on employees' performance. The examination of these three hypotheses will not only help the researcher to validate or invalidate them but also account for the research question related to the extent to which Moroccan universities can implement the three major applications of TQM *financial, academic, and administrative* reforms. More hypotheses.

Section Four: Organizational Performance

Introduction

This section probes into the balanced scorecard variable with a particular focus on the internal and external evaluations of the higher educational institutions' performance in Morocco. This paper aligns the national experience of HE assessment with the international framework seeking to adopt and implement the most congruent models of achievement evaluation within universities. Accordingly, many universities around the world have been putting to the test some of the most valid and comprehensive paradigms of performance appraisal. The outcomes of these implementations have demonstrated that the models that consist of extensive and resilient financial and non-financial drivers of performance are more likely to be ratified and implemented as self-assessment instruments within universities. This finds justification in the multidimensional nature of these models that qualify them to account for wide-ranging aspects of HE performance, including finance, accounting, management, operations, marketing, etc. In this context, this section provides a thorough overview of eight extensive models of performance evaluation as it seeks to interrogate and explore the relevance of some of them (particularly the balanced scorecard BSC) to the Moroccan context. In this regard, the following models have predominantly been implemented to weigh up the achievements and effectiveness of tertiary education all over the world. These are Performance Measurement Matrix (Keegan et al. 1989), Performance Measurement Questionnaire (Dixon et al. 1990), Performance Prism (Neely et al. 2001, 2002), SMART Pyramid (Cross & Lynch, 1988), European Foundation for Quality Management (EFQM, 2003), Integrated Performance Measurement System (Bititci et al. 1997), The Results and Determinants Framework (Fitzgerald et al. 1991), and the Balanced Scorecard (Kaplan & Norton, 1992). On that account, a substantial part of this section is devoted to reviewing the theoretical underpinnings of the balanced scorecard and reflecting upon its relevance and applicability in the Moroccan tertiary education. The significance of this model is drawn from the extensive reading of the international literature that validates and authenticates its position as the most qualified framework for the quantification and assessment of organizations by integrating the financial perspective, customer knowledge, internal processes, and learning and growth perspective to create a strategic apparatus of evaluation. This model seems on the cutting edge of its rivals owing to its capacity to convert the strategic mission and vision of universities into well-defined, measurable operations, empower senior executives to process, and invest the outcomes to make further adjustments and improvements of their management. In this sense, the BSC is

deemed a management system, which facilitates the connection between the strategic vision formulated at the level of the senior management and the daily processes and operations executed at the level of units and departments. What is more, this section argues that though there is an absolute dearth of the BSC implementation in Moroccan public universities, there exists a clear national strategy. This roadmap entices the adoption and deployment of the most comprehensive models of performance evaluation with HEIs. Hence, the scope of investigation of this paper expands into the prospect of integrating the BSC as the primary method of assessment in the public universities in the kingdom. By way of illustration and substantiation of the feasibility and appropriateness of the balanced scorecard paradigm to the Moroccan specificity, this section sheds light on the pioneer experience of AL Akhawayin University in embracing and implementing the BSC as the primary metric (system of measurement) to carry out annual self-evaluations of its mid-term (2010-2014) and long-term (2015-2020) strategic plans. AUI's explicit objective has been to build a tradition of yearly self-assessment of its goals and achievements based on the BSC paradigm. Meanwhile, according to the newly established doctrine of assessment by the National Charter of Education and the Statute 01-00, many projects have been initiated to gauge intrinsic and extrinsic performance within the framework of the TEMPUS projects throughout several public universities: Mohamed V University Agdal (2005-2008), Cadi Ayyad Marrakech (2008-2010), AQI – UMED (2010-2013), and University Abdelmalek Essaàdi (2009-2012). The majority of these programs have been crafted with the intent to execute SWOT analysis to get a snapshot barometer for the universities' strengths, weaknesses, opportunities, and threats under the supervision of the European Union partners. In this, organizational performance is a dependent variable that is operationalized by four dimensions of BSC.

1 Prominent Performance Measurement Models :

The growing criticism regarding the numerous inadequacies of the financial/accounting perspective has enticed many scholars and firms to elaborate extensive models that incorporate financial and non-financial indicators. Therefore, there are many paradigms such as Performance Measurement Matrix (Keegan et al., 1989). Performance Measurement Questionnaire (Dixon et al. 1990), Performance prism (Neely et al. 2001, 2002). SMART pyramid (Cross & Lynch, 1988); European Foundation for Quality Management (EFQM, 2003). Integrated Performance Measurement System (Bititci et al. 1997). The Results and Determinants Framework (Fitzgerald et al. 1991); and the most popular paradigm the Balanced Scorecard (Kaplan & Norton, 1992). They have gained fame and credibility as they have

provided broader insight and predictable long-term indicators comparing to short-term profits (earnings) and temporary financial indexes. These models have dug deeply into many unexplored criteria such as quality, leadership, organizational environment, human capital, etc.

1.1 Performance Measurement Matrix (PMM):

The founders of the performance measurement matrix, Keegan et al. (1989), joined their efforts to come up with a paradigm that would compensate for the staggering inadequacies that the antecedent models have demonstrated in their endeavours to quantify performance. Indeed, most of the premature paradigms have fallen short of expectations of providing comprehensive models that would serve every organization seeking to measure the various intricate criteria of its performance. The overwhelming obstacle is embodied in the generation of an all-inclusive model, which involves the financial and non-financial indicators that would contribute to the provision of a credible and exhaustive method of assessment and measurement of organizational performance. Therefore, PMM has been developed with the aim of measuring both the financial and non-financial parameters, while incorporating clear and straightforward generic dimensions, namely internal versus external and cost versus non-cost elements.

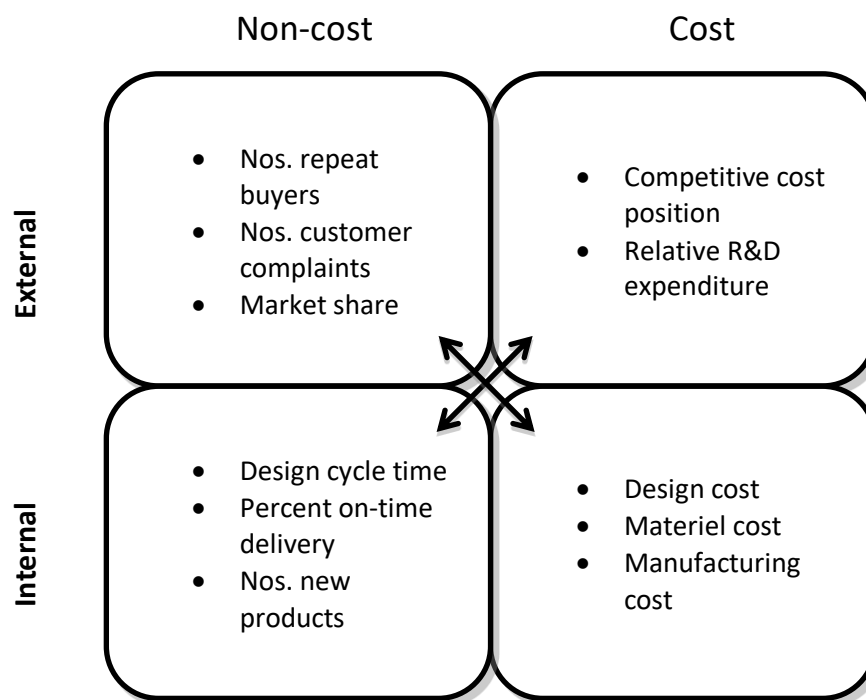


Figure 15: Performance Measurement Matrix (PMM) (Keegan et al. 1989).

In this regard, and according to Keegan et al. (1989), the performance measurement matrix has been the pioneer paradigm that has received the earliest recognition of being a well-proportioned model. This acknowledgement is primarily derived from the integration of symmetrical elements belonging to economic and non-economic criteria of performance measurement. The inclusion of these multifaceted dimensions gives this model remarkable flexibility of adaptation and a strong possibility of implementation within different organizations regardless of their operating fields. Notwithstanding the increasing fame of this paradigm, it has received severe criticism regarding its failure to depict interrelationships of its so-called overall dimensions (Neely et al. 2000, p.1122). Simply put, it lacks a sufficiently detailed account of the connections between its most basic components (internal versus external and cost versus non-cost), which undermines its integrated structure.

1.2 Performance Measurement Questionnaire (PMQ):

Dixon et al. (1990) construct the performance measurement questionnaire to leverage the decision-making process at the management level. This measurement instrument has the prospect of lining up the strategic objectives of organizations with performance measures. This has been confirmed by Pun & White (2005), who state that PMQ is a tool that assists managers in diagnosing possibilities of improvement in their organizations. It helps in estimating the impact of the currently implemented measures on the boosting and scheduling of the improvement schemes. PMQ has been built around four significant axes of improvement. These are alignment, congruence, consensus, and confusion. By surveying these areas, this model aims to audit the correspondence of the performance measurement systems to the critical goals of organizations. By way of explanation, it delineates and assesses the contemporary as well as the future aspects of improvements that would best meet the strategic vision and objectives of the firm. Therefore, the distinctive feature of this model lies in its focus on inspecting and verifying the appropriateness of organizational performance to organizational strategies, development schemes, and improvement of future projections and potentials. Therefore, a substantial portion of the questionnaire centres on the assessment of areas of improvement, whereas the second portion emphasizes factors of improvement.

Table 8: Performance Measurement Questionnaire (PMQ) (Dixon et al., 1990).

Long-run importance Of improvement	Improvement areas	Effect of current Performance measures on Improvement
None>>>>Great 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6 7	Quality Labor efficiency Machine efficiency	Inhibit>>>> Support 1 2 3 4 5 6 7 1 2 3 4 5 6 7 1 2 3 4 5 6 7

Concerning the areas of improvement, they evaluate three dimensions: quality, labour efficiency, and machine efficiency. Meanwhile, factors of improvement target long-term effectiveness as they seek to appraise and achieve excellence. The questionnaire has been designed in a way that enables the respondents to go through and rate four major sections. The first section is devoted to data collection linked to organizations and participants; the second section concerns the rating of the current performance measures; the third section assesses performance indicators; in the last section, raters identify the most compatible performance measures to their actual performance. The limitations of this paradigm are embodied in its focus on the current improvement at the expense of the constant improvement (Ghalayini & Noble, 1996), and the lack of a well-defined framework for this model (Ghalayini et al. 1997).

1.3 Performance Prism (PP):

Neely et al. (2000) bring forth an exhaustive measurement system paradigm that has been given preeminence over other competing models owing to the thoroughgoing dimensions it theorizes. The researchers have given priority to stakeholders of both profit and not-for-profit organizations. These include a wide range of shareholders, employees, customers, lawmakers, suppliers, intermediaries, etc. Therefore, stakeholders' satisfaction and stakeholders' contribution have been identified as primary dimensions and have been placed at the heart of the three other perspectives underlying performance prism, namely Strategies, Processes, and Capabilities. The bottom line of this paradigm can be summarized in the correlation that Neely et al. (2002) have established between the top facet of prism Stakeholder Satisfaction and the bottom facet Stakeholder Contribution along with the previously mentioned intermediate dimensions.

Mainly, it highlights the mutual interaction between stakeholders and organizations based on a win-win interplay (transaction) in which the organization strives to satisfy their needs in return for a substantial contribution to its outlined strategies and objectives. Neely et al. (2002)

further shed light on these five intertwined dimensions as they identify and inspect the various stakeholders that intervene in organizational performance and highlight their intended contributions to boost performance. They also question and investigate the strategies that should be put into practice to satisfy the stakeholders. What is more, they inspect the essential processes to implement these strategies along with the necessary capabilities required for the accomplishment of these processes.

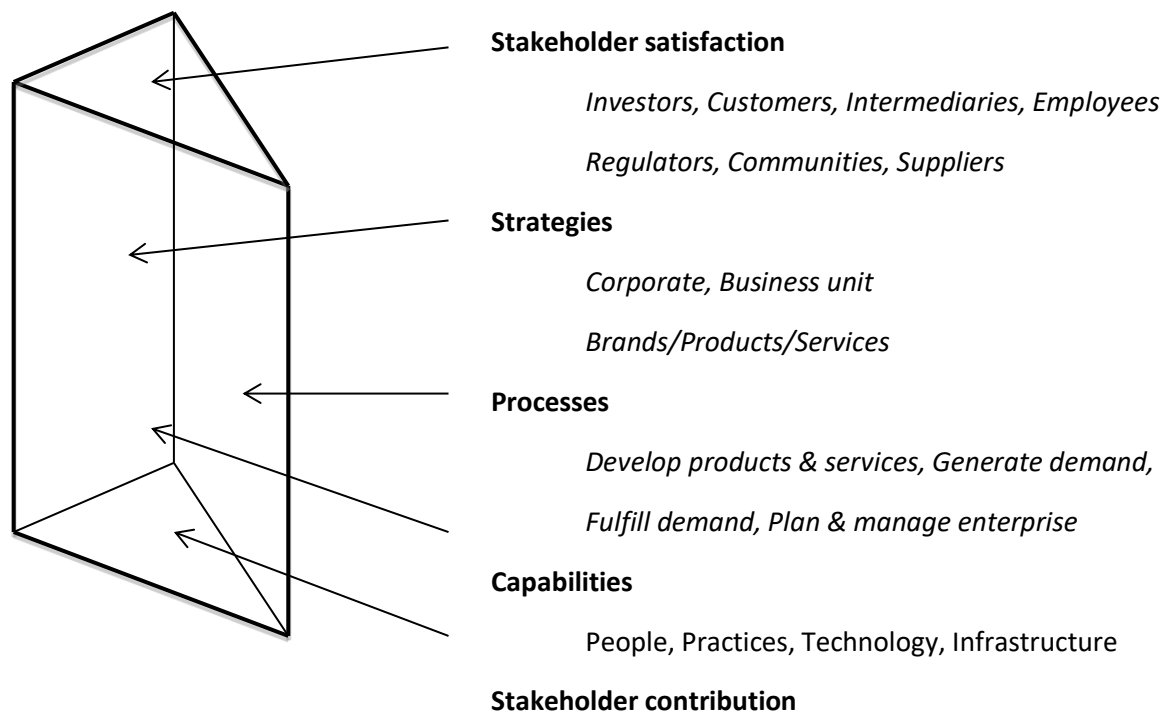


Figure 16: The Performance Prism (Neely et al., 2001).

The ultimate goal is to create value that would intrigue stakeholders and entice them to contribute to the improvement of the existing value. In the meantime, this paradigm is far from being free of deficiencies. It is unable to account for how the performance measure can be carried out. In addition, some measures seem too theoretical to be put into practice. Finally, it falls short of illustrating the consistency of the previously implemented performance measurement systems with a firm.

1.4 The Strategic Measurement Analysis and Reporting Technique (SMART) PYRAMID:

Lynch & Cross have advanced the SMART paradigm at the beginning of the '90s to make up for the extensively outlined shortcomings related to the accounting and financial

performance measurement systems. It has been characterized as a hierarchical model (Neely, 2007) as it sheds light on the financial and non-financial metrics of performance measurement in a pyramid-shaped structure that comprises four levels. The hierarchy starts with the senior management (the summit of the pyramid) that establishes the corporate vision and communicates it to the sublevels of the organization. Meanwhile, the measurement system starts from the bottom (at the operational level) as daily operations, and upward measurements of units are continuously executed to help managers take improvements decisions. The subsequent level, which is immediately adjacent to the top management, concerns business units that set and work on interim financial performance objectives (cash flow and earnings) and long-run market share and growth (market position). At a lower level, the business operating systems encompass non-financial indicators (customer satisfaction, flexibility, and productivity) and provide an entirely new and more comprehensive outlook to performance measurement

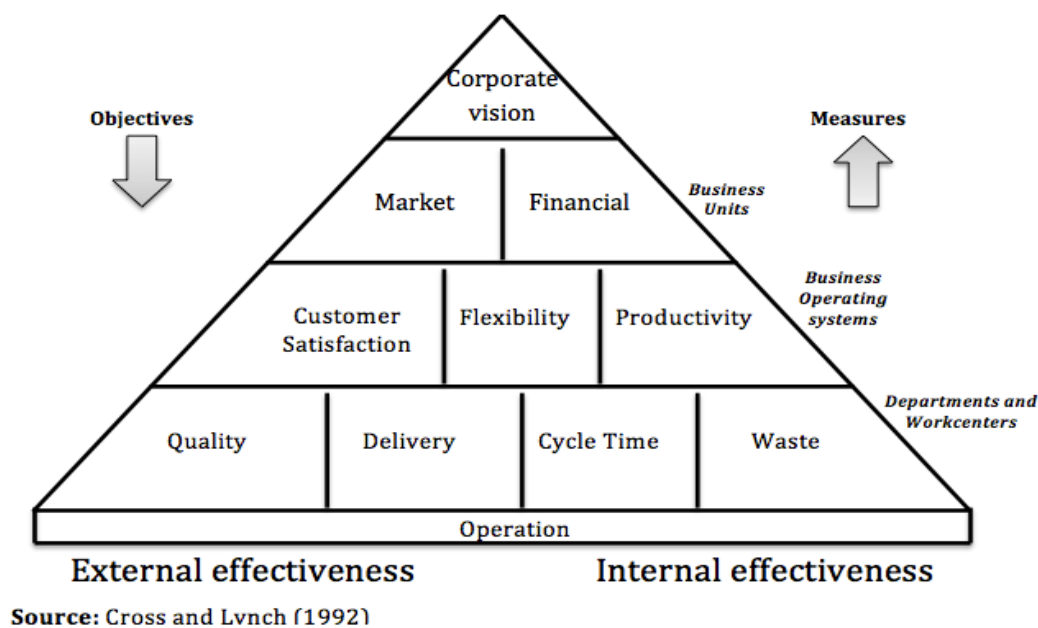


Figure 17: SMART PYRAMID (Cross & Lynch, 1992)

compared to the traditional financially based perspective. The last level, departments, and work centres include basic performance measures, which have derived, been from the third level, namely quality, delivery, cycle time, and waste. It seeks to weigh single departments and report the outcome to the higher levels. The base of the pyramid is split up into two edges. The right edge stands for internal efficiency measures, while the left edge refers to external effectiveness measures. These four levels have an enormous impact on the intrinsic efficiency and extrinsic effectiveness of the organization. However, many critical issues that have been

raised throughout the literature have undermined this paradigm. For instance, the broad terminology used in this paradigm can bear different interpretations, which makes its implementation rather too intricate (Neely et al., 2000). Besides, it identifies exact mechanisms to determine fundamental indicators of performance. Ultimately, ongoing improvement seems to be lagging in this paradigm.

1.5 European Foundation for Quality Management (EFQM):

The European Foundation initiated the EFQM business excellence model in 1994 for Quality Management. It has been developed with the intent to provide a holistic measurement instrument to worldwide organizations and firms. To that end, the model has targeted the achievement of excellence and sustainable improvement by instituting self-evaluation and self-enhancement of the organizational outcome. On account of these top priorities, it has been gaining fame among European institutions and firms that have embarked on adopting and implementing it to quantify and appraise their performance.

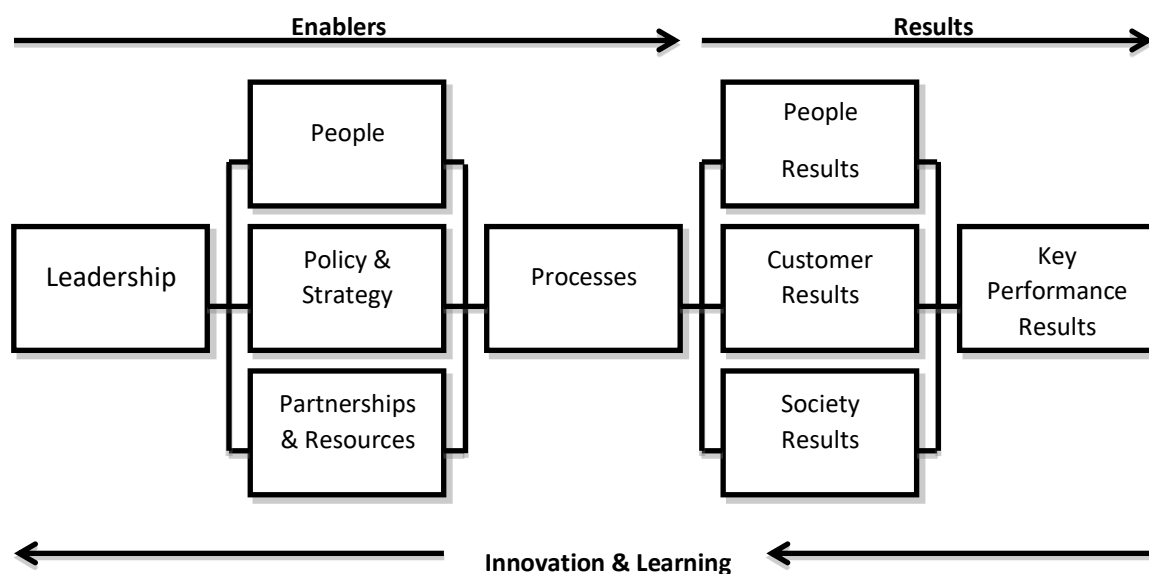


Figure 18: European Foundation for Quality Management (EFQM) 2003.

Concerning the functioning of the EFQM business excellence, the flow of power and influence is from the right to left. That is, from leadership through processes to crucial performance results. The structure of this model consists of nine reference points, which are further broken down into five enabling criteria (leadership, people, policy and strategy, and partnerships and resources) and four results (people results, customer results, society results, and critical performance results). Therefore, good leaders play the roles of enablers to ensure the desired results. Processes, which are positioned in the middle of the paradigm, enable results

through the contribution of talented and well-trained human resources (people), pertinent and well-built policies and strategies, as well as supporting partners and resources that would take part in the accomplishment of the results. Ultimately, key performance results are long-range sustainable outcomes that can be affordable only if organizations ensure satisfactory results to customers, people, and society altogether. Despite the EFQM's endeavours to provide an all-embracing model to self-assess organizational performance, many critiques have been raised regarding its bureaucratic nature and inadequate outlining of the way that would permit organizations to design and carry out pertinent and efficient performance measurement.

1.6 Integrated Performance Measurement System (IPMS):

Bititci et al. (1997) conceive the Integrated Performance Measurement System as a metric for weighing and benchmarking the correlations between different performance measures. It has been devised in a way that allows for the quantification of the process of performance management through a four-level framework: corporate level, business unit level, business process level, and activity level (Bititci et al., 1997). Each of these levels comprises the same factors: stakeholders, control measures, environmental positioning, improvement objectives, and internal performance measures. It is worth mentioning that this paradigm has given top priority to stakeholders all across the four stages underlying the targeted continuous improvement. Therefore, the satisfaction of stakeholders' needs has been attached to performance measures and the mobilization of the entire organization to meet their requirements. Furthermore, Bititci et al. (1997) associate this performance measurement system with the organization strategies, which are contingent upon external factors. This comprehensive perspective also includes the internal structure and processes of the organization. However, the Integrated Performance Measurement System is somewhat ambiguous and lacks a homogeneous account concerning the logical connections between different measures (Suwignjo et al., 2000).

1.7 The Results and Determinants Framework (RDF):

Fitzgerald et al. (1991) devise the results and determinants framework intending to sort out measures into two big headings: results and determinants. This framework has been originated from the conviction that competition between organizations should not be confined merely to the cost-price segment, but it should preferably exceed it to reach six primary dimensions, namely competitiveness, financial performance, quality of service, flexibility, resource utilization, and innovation. Fitzgerald et al. (1991) consider these six criteria as

subclasses under results and determinants. Organizations attempt to achieve a competitive advantage in each of these six dimensions by putting some twenty-six measures under scrutiny. Therefore, Competitiveness is measured by the ability of the organization to gain a better market share, increasing sales, and building up a large customer base. Concerning Financial Performance, it calculates earnings and profitability that secure the availability of the necessary liquidity to meet immediate and short-term expenditures (obligations). Quality of Service, as vital as it is, consists of eleven types of measures, which aim at ensuring the premium quality of goods and

Table 9: The Results and Determinants Framework (RDF), (Fitzgerald et al., 1991)

Results	Financial performance
	Competitiveness
Determinants	Quality
	Flexibility
	Resource utilization
	Innovation

services to generate reliability, smooth communication, and availability. As for Flexibility, it targets the appraisal of the volume (quantity), delivery rapidity, and specification of services and products. Concerning Resources Utilization, it seeks to evaluate the extent to which organizations allocate various resources productively and efficiently.

The principal distinction between results and determinants categories lies in the featuring of the former (results) as lagging indicators thus, predicting outcomes to change objectives based on results, and the latter (determinants) as leading indicators that emphasize results after a period. On that account, this framework measures current performance in light of achievements of business performance as accounted for by the determinants. The significance of these indicators is reflected in their contribution to determining future performance factors as part of strategic planning.

1.8 Balance Scorecard (BSC):

Kaplan and Norton (1992, 1996) were on the leading edge of exploring and elaborating the most comprehensive framework of organization performance measurement. For this reason, they embarked on a year-long investigation of twelve firms and shared the firm conviction that the financially-based measures adopted throughout the participants were quite distorted. They

blamed the heavy emphasis on the control system within these organizations. They demonstrated that the primary deficiency of the traditional method was embodied in its inadequacy to associate operational performance with strategic vision, mission, and objectives to convey the results to the senior management. Their experience within these firms helped them building a deep conviction that no one-measure framework could account for the multifaceted organizational performance. Hence, they started developing a model that would add up other non-financial indicators to the traditional financial measures.

Kaplan & Norton (1992) had brought forth what would later be one of the most prominent and widely-used performance measurement systems. The Balanced Scorecard's fame had primarily been derived from the multidimensional perspectives it had initially been grounded on, and which integrated both financial and non-financial metrics to develop organizational strategies conjointly with assessing intangible assets and operational areas of improvement. These defining features, along with its flexible and adjustable nature, have put the BSC in the mainstream of performance measurement.

The revolutionary idea that each unit in the firm has to elaborate its model of scorecard depending on its specific operational strategies has made of the BSC a very adaptable measure that can be customized under departmental, business units, and sectional operations. This makes the bottom-up flow of outcomes quite meaningful to top executives. In point of fact, the BSC has been characterized as a resilient performance measurement paradigm that transcends the long-established financial measures and develops organizational strategies. In this respect, Horvath & Partners (2004) maintain that the significance of the BSC method of measurement is embodied in the forming and carrying out of a strategic vision that can be further reflected into well-defined goals and transparent financial and non-financial scales.

Kaplan & Norton (1992) accentuate the leading role of the BSC in leveraging the competitive strategy of organizations. They further conceptualize the balanced scorecard as a management system that facilitates the liaison between strategic vision formulated at the level of the senior management and day-to-day operations at the level of sections, departments, and offices. This is accomplished by converting strategies and visions into objectives and measures and by creating a channel to convey them to supervisors and employees to achieve the long-term goals. This is in line with what Kaplan and Norton state, "It provides executives with a comprehensive framework that translates a company's strategic objectives into a coherent set of performance measures." (1993, p. 139).

The strength of this paradigm lies in its capacity to convert the strategic vision into quantifiable operations and courses of action that provide sufficient information to the management for future adjustment and improvement schemes. Accordingly, operational measures are deemed the drivers of prospective financial performance. Otherwise stated, this paradigm has the merit of integrating vision with action by translating the vision, mission, and strategy into an exhaustive set of performance measures at different hierarchies of the organization. The ultimate purpose is to keep track of the short-term financial outcomes as well as the long-term intangible assets (customer satisfaction, etc.) that contribute to the growth of the organization.

The Balanced Scorecard

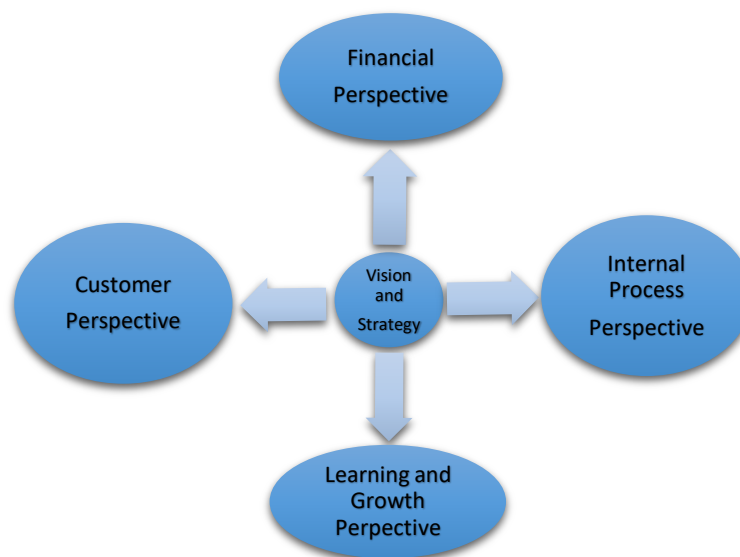


Figure 19: The Balanced Scorecard (Kaplan & Norton, 1992)

Meanwhile, it is noteworthy that Kaplan and Norton have never denied the importance of the financial factors in weighing organizations. Yet, they contend that adopting purely financial measures would provide a one-sided outlook of organizational performance. Indeed, in default of a comprehensive framework that would piece all elements together, namely, short-termism and long-termism as well as financial and non-financial measures, other unidimensional patterns would provide a biased account of overall performance in organizations. Unquestionably, the BSC has been perceived to be the most qualified framework for quantifying organizations by incorporating factors that do not necessarily involve financial metrics. Financial measures have a deficiency of reporting past financial and accounting data without taking into consideration future projections and investments. The integration of

operational and financial measures provides a better prospect of detecting potential growth opportunities and assisting top managers in their strategic planning.

The multiple measures framework that Kaplan and Norton put forward to assess and evaluate organizational performance strikes a balance between underlying perspectives to establish a straightforward link between performance and various measures. The BSC limits information flow to managers by focusing on four primary dimensions: customer perspective, financial perspective, internal process perspective, and learning and growth perspective.

1.8.1 Financial Perspective:

It aims at providing illumination and insight to senior executives about how their organizations should appear to the shareholders. In other words, it seeks to give a lucrative response to the financially related question: how can an organization sell itself to shareholders to optimize its favorable financial outcomes? This denotes that stakeholders, in particular, investors make their investment decisions based on the firm's financial results, which are regularly reported. This dimension reflects Kaplan & Norton's (1996) implicit recognition of traditional financial methods' crucial role in quantifying organizational performance. These measures include, but are not limited to, Cash Flow, Return on Investment, operating income, operating costs, net profit rate (Wu, Lin et al. 2011). These financial measures provide a projection of an organization's three bottom lines, namely organizational profitability, organizational growth, and stockholder value.

1.8.2 Customer Perspective:

The BSC holds customer satisfaction in high regard as it provides clearly defined measures to ensure quality goods and services. Therefore, in addition to customer satisfaction, other essential steps relative to this perspective involve customer retention (keeping already existing customers), customer profitability, customer acquisition (attracting new customers), and market share (the proportion that a company has in a market). These are considered lag measures, as they constitute the outcomes of various led measures. Indeed, to obtain loyal customers, a company must satisfy their needs and requirements through many actions. These entail delivering goods and products on time, charging a reasonable price, and guaranteeing high-quality goods and services. Critical processes in customer perspective are the prospection of target customers and market segmentation (the division of customers into sub-groups to detect common interests and needs) to assess and quantify competition relative to the designated

segments. The final objective is to have a competitive advantage over the main competitors in the marketplace. According to this perspective, an organization's motto should be "customers are kings" as they are the key to success and growth. Satisfied customers will contribute to promoting the image of an organization by praising and recommending its products and services to their surroundings, which will eventually increase its market share.

1.8.3 The internal business process:

This perspective denotes that any organization that seeks to achieve financial gains and earn customer satisfaction and loyalty has to build internal processes congruent with its short-term and long-term objectives. Two primary goals stand out concerning this perspective, namely prospecting the market segments that the organization perceives to be promising and ensuring maximum profitability for shareholders. Therefore, senior executives must design and craft bottom-line internal processes that will yield excellence and distinction in the marketplace. Hence, the BSC can give managers a helping hand to map out the most effective internal processes that will meet customers' and stockholders' requirements. In this regard, Kaplan & Norton offer a four-cluster pattern to put together processes that generate identical value. These clusters are operations management, customer management, innovations, and regulatory and social. These processes have immediate effects on the organization's market share and growth, the speed and efficiency of goods and services distribution, and the extent of achieving its financial objectives. What is more, when identifying the vital internal processes, top management should pay particular attention to the design of products, day-to-day operations, and procedures, the marketing strategy promoting products and services, sales plans, and customer service and delivery schedules. An efficient approach to consider while outlining the internal processes is the SWOT analysis. It has a proven capacity of detecting the strengths that make an organization a strong rival with a noticeable competitive advantage; the weaknesses that may hinder further growth and expansion; the opportunities for acquiring more customers and shareholders; and the threats that may compromise the achievement of the strategic vision and objectives of the organization.

1.8.4 The learning and growth perspective:

Kaplan & Norton (1992) connect innovation and continuous learning and training with creating and preserving value. They highlight the crucial need for organizations to continually develop innovative products and services and launch them in the market to stay competitive and maintain their market share. They further underscore the significance of intangible

capabilities in constructing robust internal processes and incepting value creation (maximizing the worth of products, services, and a firm to create better value for clients and shareholders). This perspective is founded upon three intangible cornerstones: human resources, information technology systems, and the organizational procedures that guarantee empowerment and alignment. Concerning the first criterion, it refers to the development of human capital competence and expertise through constant training and empowering employees at different organization levels. The second feature measures the extent to which IT systems are implemented to keep the organization updated with the customers and market novelties. An organization's ability to handle its IT systems within its financial means is crucial to its growth. The last standard has to do with the organization's capacity to bring innovative changes that will eventually lead to the fulfillment of its vision and goals. Kaplan & Norton label these three measures as the "infrastructures" underpinning the organization's long-term objectives, growth, and expansion.

Overall, the entirety of the organizational performance system has been designed after assiduous theoretical and empirical testing and examining the various patterns. The ultimate purpose is to quantify firms' performance and inspect operational efficiency by enhancing decision-making mechanisms. On that account, some of the previously accounted for models have proven to have more practical applications than their counterparts with purely theoretical underpinnings do. Meanwhile, despite the vast diversity of the performance measurement models, some underlying generalizations can be tracked down according to the chronological order of developing and implementing these paradigms. In this regard, three major temporal trends can be highlighted: before, early, and the aftermath of 1980s controversial traditional one-dimensional approaches; the beginning of 1990 and late 1990s elaboration of performance measurement systems; and improvement trends during the late 2000s up to the currently prevailing development of performance measures. In the meantime, the balanced scorecard financial and non-financial set of metrics have overshadowed other models owing to its all-embracing and multifaceted dimensions that can be implemented to appraise any organization, including higher education institutions.

2 The Relevance of the Balanced Scorecard to Tertiary Education:

The thorough scrutiny of the literature relative to the BSC's adoption and utilization in tertiary education brings forward the dearth of substantial studies and research papers that would account for the universities' reluctance to put this approach into practice. Karathanos &

Karathanos (2005) highlight the scarcity of published materials documenting BSC usage in higher education. Similarly, Beard (2009) asserts that the primary reason for this literature's insufficiency is the unawareness of the value-added that the BSC would create within HEIs as he argues against the claim that the universities' strategic objectives are inconsistent with the BSC paradigm. In the meantime, Rahman & Hassan (2011) maintain that embracing and implementing the BSC is no longer a decision left at the discretion of HEIs, but rather a requisite dictated by various internal (departments) and external (the ministry of higher education) factors that intermingle with the exigencies of the marketplace of education. In a similar vein, Asan & Tanyes (2007) attribute the narrow expansion of the BSC to the default of lucid procedures that would break it down and make its implementation in higher education smooth and meaningful. For this reason, Pineno (2008) introduces another view advocating the implementation of the BSC and underscoring its effective role in improving universities. He states that regardless of the noticeable reluctance to embrace the BSC method in HEIs, several case studies conducted at the national and international contexts have established clear evidence of this approach's efficacy in shaping the universities' performance. Therefore, according to these scholars, for universities to meet the growing demands and needs of customers (students) and provide quality products and services, their management systems have to center around weighing improvement and performance using the balanced scorecard measurement instrument.

3 The Application of the Balanced Scorecard in Tertiary Education:

Despite the previously stressed shortage of BSC implementation in tertiary education, many universities worldwide have been striving to incorporate this method into their management systems. In this regard, they have initiated a series of endeavors to build and adjust models that revolve around evaluating and monitoring performance based on the balanced scorecard. Within this context, Stewart & Carpenter-Hubin (2000) affirm the BSC metrics' widespread adoption to measure and support the universities' management. Chang & Chou (1999) undertake research in which they survey 69 heads of departments of accounting and conclude that the majority of the participants favor the applicability of the balanced scorecard in HEIs. What is more, Azizi et al. (2012) examine this issue from a broader perspective as they survey a substantial number of universities throughout the world to explore the most congruent philosophy with the universities. They conclude that HEIs are not-for-profit organizations that can operationalize the full set of views underlying the BSC. Meanwhile, they recommend substituting the customer criterion with the financial indicator for more effective use of this

model. Above all, HEIs are predominantly considered nonprofit organizations with vision and mission directed towards customers rather than benefits and financial lucrativeness. Additionally, Rice & Taylor (2003) maintain that many universities have resorted to the BSC method to quantify performance metrics. Therefore, higher educational institutions have identified some standard features or indicators underlying the BSC: strategic planning, lagging and leading performance metrics, upgrading effectiveness and quality, and engaging employees and faculty in different processes.

Sutherland (2000) gives an account of the implementation of the BSC by the Rossier School of Education at the University of Southern California for the objective of evaluating its academic curricula and planning procedures. Chen & Shiau (2006) probe the Taiwanese higher education to determine the extent to which the BSC can be applied to appraise performance as a strategic management apparatus. This research has been carried out at the "Chin-Min Institute of Technology" (CMIT). It has targeted five primary strategic themes: appropriate financial system, harmonious strategy with customer requirements, organizational training and management, and highly competent personnel. This case study's outcomes disclose the necessity to identify specific, quantifiable performance measure indications (PMIs) to weigh up strategic objectives.

Cullin et al. (2003) highly value the private sector's adoption of the BSC and suggest that higher education follows suit. They recommend implementing this approach as a useful strategic instrument for managing universities, measuring, and evaluating their performance. Carlotta et al., (2012) consider the utilization of the BSC in higher education to be very beneficial as it goes beyond the conventional economic-financial approaches of measuring performance. They believe that it throws light on multiple dimensions of the university that the traditional means of quantification fail to weigh up - such as knowledge transmission and relational and intellectual capacities. What is more, Philbin (2011) underscores the role that a well-built performance measurement such as the BSC can play in upgrading universities' management. Likewise, Chen et al. (2006) regard the BSC's influence as a strategic tool of management and performance management system on the change that may take place within HEIs. Nefstead & Gillard (2006) keep a record of the American colleges and universities that involve the BSC as part of their management systems and assessment processes. The list comprises Fairfield University, University of California System, the Minnesota College of Food, Agriculture and National Resources Sciences, and the University of Wisconsin-Stout.

Karathanos & Karathanos (2005) give a thorough account of the higher educational institutions' appropriation of the Baldrige Education Criteria for Performance Excellence as they put into operation the BSC. This research concludes that in spite of the existing similarities between the metrics of the BSC in education and business, there is one major disparity related to the financial outcomes in business versus students' learning outcomes in education. Similarly, Beard & Humphrey (2014) make use of the BSC approach to align the University of Information Technology Resources with the Malcolm Baldrige Results Criteria for Performance Excellence in Education. Therefore, four underlying perspectives have been lined up to evaluate the university's performance: learning and process outcomes, customer-centered outcomes, and budgetary-monetary marketplace outcomes.

4 BSC Application and performance Evaluation in Moroccan Higher Education:

The balanced scorecard paradigm has been triggering a considerable debate since its initial incorporation into the world of education. In a point of fact, since the early days of the BSC integration into the intricate process of measuring higher education performance, a myriad of questions regarding its feasibility, scholars and institutions have raised applicability, and relevance to the particular field of education. The rarity and even the absence of documented experiences of the BSC implementation in HEIs in most countries, including the Moroccan context, have most probably heated the debate concerning the reasons behind universities' overwhelming reluctance to embrace this performance measurement matrix.

Hitherto, the BSC has not been able to broaden out into education in the same fashion that it has prevailed business field. The prevailing assumptions behind this modesty of exploitation of the BSC in HEIs are the striking lack of understanding of the enormous potentials it can bring to the university and the lack of the necessary resources that would lay the groundwork for its implementation in educational settings.

Meanwhile, this paradigm's overwhelming success in business, which is mainly due to its confirmed bearing on measuring corporations' accomplishments regarding profitability, operations, and human resources, has undoubtedly enticed scholars and institutions to gradually embrace and adjust this model to undertake systematic quantifications of their performance. What is more, the strength of the BSC has been drawn from its multidimensional characteristics that combine traditional financial indicators with procedural, strategic, and human capital drivers of performance. Therefore, many universities have embarked on deploying the BSC processes following its core function of translating the management's vision and mission into clear strategies to break them down into strategic themes. This whole process aims at creating

quantifiable goals, which in their turn, lead to measurable outcomes at all levels of the organization.

In recent exploratory research at the national level, Lamchaouat et al. (2017) have adopted a multidimensional approach to account for organizational performance in the Moroccan tertiary education. Therefore, they have suggested twenty-one facets as cornerstones for assessing the Moroccan public universities: finance and economy, identity, organization, teaching and training, reputation and brand image, environment and ecology, internalization, diversification, governance, societal performance, employability-insertion, communication, partnership, technology, innovation and creativity, university size, entrepreneurship, conformity, scientific research, extracurricular and democratization. Lamchaouat et al. (2017) conclude that these facets of the university performance are not exclusive, but rather inclusive and complementary. By way of explanation, they provide the instance of the positive impact that the overall performance can have on the facet associated with the university's reputation and brand image. Meanwhile, they recognize that their exploratory article is far from being exhaustive concerning covering different aspects of the Moroccan higher education performance. They maintain that further research should be undertaken to determine appropriate performance indicators related to these twenty-one facets of achievement based on scientifically valid techniques. What is more, these indicators should meet the expectations and interests of different stakeholders, namely faculty, administrative body, tutors, non-governmental organizations, etc.

Lamchaouat et al. (2017) hold that there should be an equilibrium between these indicators based on Kaplan & Norton's (1992) balanced scorecard parameters, namely qualitative versus quantitative, external or internal, and short-term versus long-term perspectives. Ultimately, they bring into focus other exogenous variables that can be utilized to evaluate these facets of the university performance. They specify proximity to industrial sites, the socio-economic level of the population neighboring the university, government policies and legal arsenal, and the presence or not of a university campus.

It has been argued that the BSC does not only serve as an assessment apparatus but also as a supportive managerial instrument to leverage the management systems of the universities. That is to say, it contributes directly to the strategic planning and formulation of the universities' vision, mission, objectives, factors of success, and schemes of future improvement. This goes in line with Al-Matarneh's (2011) three prerequisites for the successful execution of the BSC: the setting of clear objectives of the organizational strategy, the integration of the four underlying perspectives of the BSC, and flexibility towards environmental changes such as

competition and customers. In plain English, it assists executives in making decisions linked to many academic, administrative, and governance issues based on performance feedback.

Regarding the BSC application in Moroccan higher education, the University of Al Akhawayin has broken new ground in performance evaluation. It has taken the lead by utilizing this model as the primary measurement tool of its strategic plans. AUI has pushed self-assessment boundaries to new heights by setting top-notch standards of evaluation of its yearly achievements based on the balanced scorecard paradigm (software). The university senior management scheduling of far-reaching missions and objectives stems from its long-term strategic vision and planning, which entail optimum quality education and better positioning in the international context. This overwhelming orientation towards strengthening the policy of quality assurance has been fostered through the Vice President's appointment for Strategic Plan (AVPSPF) in 2012. The proactive engagement in the QA process has also been demonstrated by disseminating the annual executive summaries since 2010. These yearly progress reports have established a tradition of quantifying different undertaken actions and schemes at all university units to weigh up the proportion of AUI's strategic plans. Therefore, all along the evaluation process of its strategic plans (2010-2014) and (2015-2020), UAI has been probing and enhancing seven key BSC drivers of performance:

- ☐ American educational model.
- ☐ Quality assurance and accreditation.
- ☐ Growth and development.
- ☐ Internationalization of the university.
- ☐ Financial sustainability/stability.
- ☐ Leadership educational innovation
- ☐ Human capital development.

The adoption and implementation of the balanced scorecard as an instrument for assessing the AUI has provided annual estimations of these factors' overall progress and achievement:

- *The academic year 2010-2011:* according to the balanced scorecard results, this year has achieved 87% of the overall performance progress of the AUI.
- *The academic year 2011-2012:* 81% is the percentage assigned to the goals' progress for this academic year, whereas 65% of the entire plan has been realized during this year.
- *The academic year 2013-2014:* 83 % is the estimated rate of the overall progress of implementing the strategic plan.

- *The academic year 2015-2016*: 83 % of the progress has been accomplished to fulfill the strategic plan (2015-2020).

These high proportions of the strategic plans' achievement reflect the considerable efforts made by AUI to strengthen quality assurance and establish the tradition of assessing the university's annual performance based on the balanced scorecard model. This unique experience of using BSC as the primary assessment instrument in a Moroccan higher educational institution triggers a significant debate concerning the possibility of embracing and implementing this method of quantification throughout the public universities in the kingdom.

In line with the context of promoting and establishing the culture of performance evaluation, the Ministry of Higher Education organized rigorous training in the external assessment of the HEIs in 2006. The primary objective of FOREVAL formation was to train and form the human resources, administrative staff, and academics to acquaint them with adequate expertise and proficiency related to conducting evaluations, drawing and analyzing data, and formulating recommendations to leverage performance. The project disclosed the ministry's policy and orientation towards adopting regular external auditing of the Moroccan universities. Many governmental decisions have been taken based on the outcomes drawn from the extensive assessment of some HEIs. In this regard, the recent accreditation and recognition of eight private higher intuitions fall within the quality assurance policy in 2017.

Politicians have put forth an effort to put into operation autonomous systems of internal evaluation and external auditing of the Moroccan higher education in its integrity. Along with the governmental incitement, these legislative frameworks have started yielding fruitful results concerning engaging universities in adopting and implementing diverse programs of assessment. Therefore, the ministry and many public universities have embarked on entering into partnerships with European and international universities and associations to help them implementing and tracking systematic paradigms of evaluation regarding their internal and external performance. Most of these projects have been developed within the framework of TEMPUS projects (Trans-European Mobility Programme for University Studies). The European countries that have taken part in these projects have brought their ingenuity and expertise to the Moroccan managers and academics to spread and generalize these experiences throughout the Moroccan tertiary education. In this vein, four outstanding projects have been carried through within the frame of these international partnerships:

- □ TEMPUS project: Mohamed V University Agdal (2005-2008).
- □ TEMPUS project: Cadi Ayyad Marrakech (2008-2010).
- □ TEMPUS project: AQI – UMED (2010-2013)

- □ Self-assessment initiative/ voluntary action: University Abdelmalek Essaàdi
 - -French partnership (AERES) (2009-2012).

I - Mohamed V University Agdal:

A significant TEMPUS project has been conducted in Mohamed V University Agdal over two consecutive periods: UMVA assessment (2005-2007) and QAREM (2005-2008). This experience's originality lies in its integration of internal and external examinations of the university's strategic missions. These missions cover scientific research, governance, teaching, and governance. The objective is to set up a robust internal quality assurance system in conformity with the reform's recommendations. Quality Assurance Reform of Education in Morocco (QAREM) is a significant project designed to share this pilot experience with the public universities. The various assessment processes have covered all the establishments and institutions of the university with the ultimate objective of weighing up and setting up a quality management system. The initial step of the project consists of determining the methodology underlying institutional assessment. In this regard, the Bologna Process, which refers to the standards and guidelines followed in the European tertiary education to ensure quality assurance, has been adopted as the methodological framework for the internal quantification of the university Mohamed V. Regarding the external evaluation, it has been the duty of specialized assessors and auditors. They have paid periodic visits to the university's different facilities and sites and have submitted reports appraising the various aspects of performance. The obtained data have been processed and analyzed to develop a reliable quality assurance system within the university.

II - Cadi Ayyad University Marrakech

This TEMPUS project has been conducted over a period of three years (2008-2010). It has sought the implementation of a system of Management of the University by Quality (MUQ). The initial stages of the first year (2008) have centered around two primary goals: (1) setting up a quality assurance system within the administrative services of the university, and (2) the adaptation and improvement of the financial and administrative objectives and procedures to meet the requirements and norms of ISO 9001-version 2000. The subsequent stages that have been undertaken during the second year (2009) have been directed towards the formulation and execution of a quality management system throughout the different administrations of the UCAM. The procurement of ISO-2001-version 2000 in 2009 crowned this experience. Thus, Cadi Ayyad has been the first Moroccan public university that has been granted this certification as recognition of its efforts to optimize its management system. In 2010, the overall experience

of the UCAM was shared and communicated to the Moroccan universities to promote and generalize this new model of quality management throughout the kingdom.

III - AQI – UMED (2010-2013)

This three-year project has engaged three Southern Mediterranean (Morocco, Algeria, and Tunisia) and three European countries (Spain, France, and Belgium) in structured cooperation under the TEMPUS academic partnership. The objective has been to develop quality assurance practices by executing a system of internal assessment within the partner universities. The project has been carried out at five intervals:

- *Interval one (2010)*: this preliminary stage has been allocated to determine the methodological framework upon which the project has been executed.
- *Interval two (2010)*: in this phase, quality assurance has been approached from a comparative perspective.
- *Interval three (2011)*: Primary assessment frameworks and references have been developed.
- *Interval four (2012)*: A self-evaluation mechanism has been developed with the European partners' support and assistance.
- *Interval five (2012)*: The project outcomes have been valorized and communicated to other participating countries' universities.

IV - Abdelmalek Essaàdi University Kenitra:

Another endeavor to provide assessments regarding university governance has taken place at University Abdelmalek Essaàdi. The general counsel of the UAE has taken the initiative to account for two terms of the presidency. The objective has been to appraise the strategic governance and overall policy of the university. This voluntary action has targeted the provision of weighable and measurable criteria related to the university's mission, management structure, organizational charts, foreign relationships, external communication, and the emergency plan (2009-2012) on the UAE's governance. The evaluation has taken the shape of a self-examination process of the UAE's different establishments all along the assessment period (from 2 to 9 May). Concerning external auditing, French experts (AERES) have been in charge of probing and investigating wide-ranging stakeholders to carry out a comprehensive intrinsic evaluation (from 25 October to 2 November 2010). According to the UAE's strengths and weaknesses, the outcomes have been sorted out to track progress and position the university in the international context. Eventually, the cooperation between the EU and Moroccan higher education has targeted maximum exploitation of the strengths and opportunities while dealing

with the threats and weaknesses generated from the SWOT analysis to upgrade public universities' internal and external performance.

5 The Implementation of the BSC as a self-assessment instrument in the Moroccan public HEIs:

The BSC's four components perspectives have strong relevance to the guidelines of the national reforms in terms of the financial application (financial perspective), administrative application (customer/ learning and growth), and governance application (internal process). This guarantees the coherence of the research's adopted model (Kaplan & Norton, 1992) with the national tertiary education reforms' updates. This consistency between the strategic policy and the conceptual model provides for implementing the BSC in the public universities of the kingdom. On that account, the proposed frame of reference's primary objective is to prospect and survey the readiness and capacity of the Moroccan public universities to embrace and carry out the BSC as the primary instrument of performance evaluation. What is more, it aims at exploring the availability of the required prerequisites and resources to put this method of performance quantification into the test and practice. Therefore, based on the previously accounted for background information, the following hypotheses are proposed:

5.1 Financial Perspective:

The financial perspective under the BSC frame emphasizes the Moroccan public universities' self-sustaining or self-funding strategies as well as the upgrade of their financial management. This goes in line with Kaplan and Norton's (1992) balanced scorecard's financial indicators that involve revenue generation and productivity. Similarly, the extended financial autonomy provides the legal framework for the Moroccan public universities to take steps to generate maximum funds from different resources. This entails the adoption of many strategies of funds raising such as state funds, students' tuition fees, publications, and remunerative scientific projects and programs (e.g., paid specialized Master's programs), refunded training and consultations, partnerships with industries, sponsorships, and research grants, donation and annual collections, etc. Meanwhile, the wise allocation and control of the total funds raised from the above activities should help the management draw up balanced budgets (payroll budget, scientific research budget, HR development budget, etc.). The objective is to monitor and reduce the expenditure while covering liabilities (financial obligations and charges) in due time. This is congruent with the prominence given to the establishment of financial control systems and their roles in achieving quality management within universities; as stated by the

BSC, "A well-designed financial control system can enhance rather than inhibit an organization's total quality management program." (Kaplan & Norton, 1992. p, 77). Therefore, a sound planning of the financial situation will enable universities to ensure a comfortable financial position and sufficient liquidity to implement the BSC.

From this perspective, it is assumed that the Moroccan public universities can raise sufficient financial funds to implement the balanced scorecard model under extended financial autonomy. The execution of this paradigm entails a subtle increase in performance and major implications for executives and stakeholders.

5.2 Customer Perspective:

This perspective holds that universities should provide quality education and quality services to upgrade their customers' satisfaction. In education, different stakeholders take part in the overall performance of universities. These include students, parents, teachers, alumni, the business community, faculty, administrators, government (Ministry of higher education, accreditation bodies), employees, etc. These stakeholders contribute to the organizational performance with varying degrees of involvement and have different concerns and interests that they expect and want from their universities. These expectations range from the time (punctuality) of delivery through the quality of services to cost appropriateness. These goals match the requirements for the operationalization of the BSC as pointed out by Kaplan and Norton "To put the balanced scorecard to work, companies should articulate goals for time, quality, and performance and service and then translate these goals into specific measures." (Kaplan & Norton, 1992. p, 73). In the higher education sphere, these Goals are embodied in providing quality education and services to stakeholders. Accordingly, this section spotlights two primary stakeholders: students and employees/administrators. Students' satisfaction is determined by the quality of the education and services they receive. This is embodied in their contentment with the pedagogical programs and curricula, their comfort with the teaching staff's competencies and professionalism, the smooth interaction with administrative departments, and the ease of access to administrative and leisure facilities. In this context, DeShields et al. (2005) maintain that HEIs should make every effort to provide quality services and satisfy students, being the participating customers' if they seek to be competitive in the education marketplace. Concerning employees' satisfaction, it is typically associated with working conditions that comprise many factors, such as the availability of the necessary technical equipment and adequate training to help them fulfill their duties. What is more, the conception of incentives to

motivate employees and administrators, along with the allocation of budgets for HR development and the engagement of the employees in the decision-making process, can trigger higher productivity. Indeed, satisfied employees can guarantee better engagement in providing excellent services to students. LeBlanc & Nguyen (1997), who link achieving excellence in business education to quality service, highlight this. Therefore, the customer perspective entails that the provision of quality education and services in the Moroccan public universities are critical to the upgrading of the customers' satisfaction and trust.

5.3 Internal process Perspective:

Kaplan & Norton (1992) underscore the significance of this perspective in reporting on the efficacy of the bottom-line internal procedures, including operation management, customer management, innovation, and regulatory and social. These constitute the internal mechanisms that pave the way to complete performance expectations (Kaplan & Norton, 2001.p, 93-94). In higher education, Daryush et al. (2008) identify four internal processes: teaching/learning excellence, curriculum/program excellence, and innovation, quality and currency of faculty, and efficiency and effectiveness of services. This section highlights these four strategic themes as the key conveyers of the value proposition (adding value to customers) to different stakeholders and determinants of the universities' financial outcomes. Daryush et al. (2008) put forth many criteria to achieve excellence in the teaching/learning process. These measurements include students and employee satisfaction, teaching awards, assessment standards consisting of course evaluations and pass proportions on professional tests, and the integration of alumni in the profession (Daryush et al., 2008). Furthermore, bringing innovative changes to the curriculum to keep it updated and open to the latest educational, business and commercial trends is another major goal introduced by Daryush and his fellow researchers. The third fundamental goal is related to the faculty incitement and credentials. The recognition of achievement and development of plans and appraisals are important measurements that contribute to the consolidation of the faculty. The ultimate goal is a barometer of the efficiency and effectiveness of the production and student services provided by universities. The type of services referred to in this theme are the time of students' registration, the number of available internships, the number of students graduating after two and four years, costs related to teaching, and administrative services (Daryush et al., 2008.p, 42). Therefore, the implementation of the BSC's critical internal processes will help the executives of the Moroccan public universities in building substantial internal operations and delivering the value proposition to stakeholders.

5.4 Learning and Growth Perspective:

This perspective takes the stand that universities cannot achieve high performance without the provision of three requirements (intangible assets): human capital, information capital, and organizational capital (Kaplan & Norton, 2004). Employees' competencies and professionalism (skills and experiences) are major factors that affect the university's capacity to deliver high-quality education and services. Moreover, the stakeholders' accessibility to an advanced information system has become a necessity for the university's regular running. Simply put, this perspective accounts for employees' learning and growing progress that contribute directly to the improvement of the organization. This section aims to explore the extent of the contribution of these three prerequisites to the public universities' performance. The provision of competent and professional human resources, along with advanced information systems and organizational capital, will favorably upgrade the overall performance of the Moroccan public universities.

6 Section Summary:

This section delves into the extensive literature of organizational performance to illuminate insights into the traditions and applications of performance evaluation and search for the most comprehensive model that would fit in the particular context of the Moroccan public universities. The ratification and integration of the performance evaluation as a critical determinant of the quality assurance process stems from the Moroccan educational system's current critical situation. This has compelled the legislators and strategic reformers to join the National Charter of Education and the statute 01-00 relative to higher education organizations with precise verification mechanisms and inspection of the internal and external performance of the public universities. What is more, this section throws light on the comparatively recent TEMPUS projects that have sought to develop and carry out some exhaustive self-evaluation programs within several Moroccan public universities. The outcomes of these assessments have been displayed to generalize experience and institutionalize the culture of self-examination of achievements. In the meantime, this section puts into perspective what it considers the most predominant model of performance assessment. Of the eight most recognized models of evaluation performance, the balanced scorecard paradigm (BSC) (Kaplan & Norton, 1992) has been qualified as the most extensive matrix for quantifying both the financial and non-financial metrics. This paradigm falls within the multidimensional aspects of tertiary education. Organizational performance is a dependent variable that is operationalized by BSC factors.

Section Five: The Overall Conceptual and Mediation Frameworks

Interrelationships among Research Variables

1 Organizational Culture, Leadership Style, Total Quality Management, and Organizational Performance:

Probing into the relationship between organizational culture and organizational performance has brought to light contradictory views vis-à-vis the nature of the correlation that gathers these two variables. Thus, researchers' plurality has deemed the association between them favorable (positive), whereas others have criticized the negative or 'rigid' nature of this link (Meyerson & Martin, 1987). Meanwhile, other scholars have underscored the straightforward correlation between culture within organizations and organizational effectiveness (Xenikou & Simosi, 2006). In fact, there is an overwhelming conviction that corporate culture has a long-term influence on performance (Kotter & Heskett, 1992). These scholars build a model based on contingent and universal paradigms. The contingent type assumes that organizations with superior performance possess robust cultures, appropriate environments, and change value and achieve long-term sustainability. These researchers contend that the universal prescriptive typology requires a culture with a particular interest in employees, customers, and stakeholders to attain durable performance. Concerning the employees' participation in the workplace, Kotter (2012) argues that organizational culture contributes to employees' satisfaction, boosts their certitude regarding how they should proceed to solve problems, and affects organizational performance. In the same vein, Denison (1984) associates a culture in which employees demonstrate high participation with positive organizational performance. In the same line of reasoning, Barney (1986) advocates the notion that some core values related to how to act with the personnel, clients, and stakeholders, along with management control, help to optimize financial performance. Similarly, Ogbonna & Harris (2000) make it clear that some organizational cultures generate optimum financial performance. What is more, Mathew et al., (2012) conclude that corporate culture leads to various outcomes concerning employee satisfaction, labor quality, and productivity. In the same line of supporting the role that organizational culture plays in boosting organizational performance, Xenikou & Simosi (2006) state that the cultural norms that contribute to performance include cooperation, teamwork, participation, and the synergy of the different organizational resources. Lok and Crauford (2004) highlight the considerable impact that organizational culture can have on organizational commitment and organizational performance. However, contrary to popular views, there can be unfavorable effects and contradictory organizational culture outcomes on

performance. In other words, there are some companies with highly rated cultures which end up into complete degeneration (Peters & Waterman, 1982), most probably due to 'culture rigidity' (Kets de Vries & Miller, 1986).

This paper establishes a link between particular organizational culture and organizational performance in the Moroccan higher education based on Cameron and Quinn's (2006) CVP model. Therefore, clan, market, and adhocracy cultures are claimed to positively affect organizational performance, whereas the hierarchy culture is presumed to have a negative impact on organizational performance.

The interrelationship between leadership style and organizational performance has long been scrutinized to pursue the positive-negative effects that the former has on the latter. In this respect, Fu-Jin et al., (2010) pinpoint that the various styles that leaders adopt can lead to a positive or negative influence on organizational performance according to the determinant factors that researchers utilize in their investigations of the nature of this correlation. Haung (2007) contends that leadership styles are the most extensive environmental antecedents affecting organizations' performance and employees' morale and satisfaction. Teece et al., (1997). Dynamic capabilities and strategic management. *Strategic Management Journal* 18: 509–33. [maintain that potent leadership behaviors can boost performance within organizations' performance challenges emerge hence the cruciality for an organization to have a distinct type of executive at the top management. In this regard, most of the literature has rated highly the role of transformational leaders in creating and shaping organizational culture. In this context, Strang (2005) accentuates the tight linkage between transformational leaders and satisfied employees, leadership effectiveness, and organizational productiveness. What is more, Boerner et al., (2007) place emphasis upon the role that transformational leaders play in raising their subordinates' motivation and instilling pro-activeness in them for the sake of achieving outstanding outcomes. In the same vein, Bass (1985) holds in high regard the influence that transformational leaders can have on their followers regarding setting top objectives, showing satisfaction with their performance, and self- improvement that enhances employees' self-efficacy and reflects on organizational effectiveness as a whole. Jabnoun & Al-Ghusyah (2005) examine leadership styles which are contributive to the execution and accomplishment of ISO 9000 through factor analysis then come to the conclusion that there are four primary determinants of success: contingent reward, intellectual stimulation, charisma, and active stimulation (as thoroughly accounted for in the leadership style section of this paper). Moreover, Fu-Jin et al. (2010) point out that the leaders who manifest distinct characteristics of

concern, interest, and appreciation vis-a-vis their employees fuel their curiosity and arouse their desire to work achieve high performance. However, other scholars have underscored the favorable effect of transactional leaders on performance. In this respect, Timothy et al., (2011) examine attentively the exchange process that enables transactional leadership to exert a positive influence on performance. Similarly, Bass & Avolio (1990) believe that transactional leaders support their subordinates and entice them to perform highly through a reward system that leads to achieving the planned performance. Timothy et al., (2011) ratify the positive association between the transactional type of leaders and organizational performance.

This paper seeks to investigate the effects of leadership styles on organizational performance based on Bass & Avolio's (1995) MLQ x 5 model. This paradigm reflects the different influences (positive or negative) that the three primary styles of transformational, transactional, and Laissez-faire may exert on Moroccan universities' performance.

Concerning the liaison between total quality management and organizational performance, it has been studied from the senior management's ability to implement adequate TQM policy to enhance organizational productivity, competitiveness, and overall performance. Therefore, throughout the relevant literature, it has been taken for granted that the execution of an appropriate TQM matrix has a significantly positive influence on performance. Mosaddegh (2006), who confirms that TQM's implementation as a managerial philosophy helps boost business effectiveness, efficiency, adaptability, and competitive advantage, has made this quite explicit. Anurangam et al. (2008) make a point of the favorable link between TQM components (such as leadership, process management, and customer focus) and organizations' quality performance. Even more, Brah et al., (2002) recognize the competitive advantage that allows the firms that implement TQM to outperform the ones without TQM policy. Likewise, Karia & Asaari (2006) argue that an appropriate execution of TQM will result in highly motivated employees who are willing to take part in the development and success of their organization. Additionally, Abdullah et al. (2010) examine TQM soft effect on the organization's overall performance and draw the conclusion that factors such as managerial commitment, customer focus, and connections with subordinates have a positive influence on the ultimate performance. Furthermore, Wang et al., (2010) find out that leadership, along with HR management, exert a positive impact on performance. Correspondingly, Joiner (2006) combines TQM's execution and the achievement of high performance within firms. Heras-Saizarbitoria et al. (2001) elucidate the straightforward favorable significance of TQM on the firms' performance. Gharakhani et al. (2013) highlight the extremely positive influence of the TQM on the firm's

financial accomplishment. Besides, Woon (2000) clarifies that the execution of the different aspects of TQM associated with managerial productivity, process management, customer focus, and satisfaction exercise positive effects on performance. Motwani (2001) contends that the application of TQM practices enhances organizational performance. Nonetheless, Dooyoung et al. (1998) go against the stream and highlight the prospect of missing the preplanned organizational objectives despite TQM's execution. This paper advances the assumption that implementing the three aspects of TQM (governance, financial, and academic applications) will result in high performance in Moroccan higher education. What is more, it puts into the test the utilization of the balanced scorecard paradigm (Kaplan & Norton, 1992) as the primary performance measurement instrument in tertiary education.

2 Leadership Style, Job Satisfaction, and Organizational Commitment

The extensive research on the significance and correlation between leadership style, job satisfaction, and organizational commitment lays bare the extremely integral role that executives assume in creating satisfactory work conditions and thoroughly enticing subordinates to commit to corporate values and objectives. The acknowledgment that leadership styles have a bearing on organizational satisfaction and commitment has predominated research since the 1920s. In this context, Hawthorne's pioneer experiments (from 1924 to 1932) associate employees' attitudes with performance, whereas it establishes no obvious liaison between the personnel behavior and financial rewards. Subsequently, advanced investigations on the behaviors of leadership that contribute to the strengthening of subordinates' satisfaction have been conducted throughout the period extending from the 1950s to the 1960s. The abundant literature confirms that leadership styles directly affect employees' job satisfaction and commitment, affecting straightly organizational performance. In this regard, Kelloway et al., (2012) relate transformational leadership to employee's satisfaction and commitment to the organization. Furthermore, Wilson (1995) maintains that leadership style upgrades employees' achievement by intensifying their satisfaction. Brockner (1988) perceive managers as boosters of subordinates' self-confidence and satisfaction. What is more, Rhoades & Eisenberger (2002) draw attention to the fact that the nature of the relationships between leaders and subordinates reflects on the productivity of the employee and the organization. They argue that leaders who are supportive and considerate towards the personnel can help to boost performance and to reduce work stress. Stogdill (1963) deems that various leadership styles possess a favorable connection with subordinates' attitude, motivation, and management, which reflect on the overall organizational commitment. Employees who demonstrate high

commitment tend to identify themselves with the organization's values and mission. They make personal compromises for the sake of the company's success. They display a much higher performance than expected. They also contribute to the general development and effectiveness of their firm. In point of fact, committed employees are loyal to their organization despite the potential challenges they may encounter. Accordingly, Savery & Luks (2001) establish a close link between the extent to which employees take part in the organization and their satisfaction in the workplace. Simply put, the employees who are involved in the decision-making process display intense commitment to the organization. Most importantly, the predominant role of transformational leadership has been pinpointed throughout the pertinent literature. In this respect, Bass (1999) makes use of the MLQ 5X as the primary research instrument to appraise leaders and their subordinates and reaches the conclusion that advocates the notion of the universality of relationships. The findings substantiate the powerful impact of transformational leadership on achieving group outcomes and group cohesiveness. Riaz et al., (2011) probe into the influence of transformational leaders on subordinates' commitment and deduce that this type of leadership exerts a positive effect on employees. Such leaders urge followers to embrace their vision and strive to accomplish it. Brown & Peterson (1993) hold that contact employees who perceive and feel their leaders' interest and concern tend to exhibit high performance. In the same vein, Lee (2004) reiterates the positive roles that transformational managers assume in fostering employee's commitment. Mohammad et al. (2011) associate transformational leadership and job satisfaction, which guarantees optimum productivity, creativity, and concern.

Cummings et al., (2010) advocate the adoption of transformational leadership since it helps to enhance satisfaction, selection, work culture and restraints the loss of essential employees (turnover). Bass (1985) holds that transformational leaders can foster job satisfaction owing to their capacity to convey their mission and intellectual stimulation to their subordinates. Besides, Al-Hussami (2008) underscores the positive influence that transformational managers have on job satisfaction. Emery & Barker (2007) confirm that transformational leaders exercise a noticeable impact on the two antecedents, namely job satisfaction and organizational commitment.

While most of the previously discussed studies rate the significance and influence of transformational leadership on the level of job satisfaction and organizational commitment positively, other scholars such as Mester et al. (2003) add the favorable effect of transactional leadership on the emotional commitment to transformational leadership. This paper assumes

that there are mediation roles of job satisfaction and organizational commitment between leadership style and organizational performance.

3 Organizational Culture, Job Satisfaction, and Organizational Commitment.

It has been widely proclaimed in management and business that organizations' prosperity is exceptionally contingent upon the prevailing culture and its effects on a variety of organizational behaviors, particularly job satisfaction and organizational commitment. These have been deep-rooted aspects of abundant research seeking to identify the most influential variables in shaping organizational outcomes and performance. Indeed, since the earliest affirmations of the significance of the productive environments to the molding of organizational culture and job satisfaction (Schneider & Synder, 1975), successive researchers such as Ouchi, 1981 and Deal & Kennedy, 1982 have accentuated the substantial changes that organizational culture can trigger regarding performance, productivity, self-confidence, commitment, and ethical behavior (Ritchie, 2000). In this line of reasoning, Mowday et al., (1982) gives prominence to organizational commitment as the most basic behavioral factor that determines employees' intentions vis-à-vis their decision to stay in the firms in which they operate. In the meantime, Mckinnon et al., (2003) maintain that satisfied personnel is the outcome of a participative management style, a flexible communication channel, and a motivational reward system that reflects on the overall organizational success. Correspondingly, many scholars have underscored the crucial and imperative influence that organizational culture can have on these two variables. Therefore, Lund (2003) explores the impact of culture on job satisfaction in marketing. He surveys American clerks and concludes that different culture types, more specifically clan, adhocracy, and hierarchy culture, exert positive or negative effects on the subordinates' job satisfaction. In a different context but the same interest, Bashayreh (2009) conducts a study of the Malaysian higher education to uncover the association between the determinants of organizational culture and job satisfaction. The outcomes confirm the straightforward link between these antecedents. Moreover, Farzianpour et al. (2016) ratify the substantial impact of culture on subordinates' attitudes regarding their job satisfaction and commitment. Peters & Waterman (1982) stress the considerable effect that culture can have on organizational commitment and performance. Odom et al., (1990) investigate organizational culture, job satisfaction, and organizational commitment and come with the conclusion that the employee's job satisfaction and organizational commitment are negatively affected by a culture that is characterized by high bureaucracy. Koustetios (1991) maintains that job satisfaction can be assessed within the organizational culture framework using one of the most famous

instruments of measurement of the ESI (Employee Satisfaction Inventory). MacIntosh & Doherty (2010) underscores the philosophical influence of organizational culture on job satisfaction among many other antecedents. Indeed, it has been argued that organizational culture exerts a remarkable impact on individual members and shapes their ambitions and goals. What is more, Kim et al. (2016) conclude that emotional (affective) commitment has a positive influence on employees' attitudes and behavior, which reflects immediately on their achievements and outcomes. Trivelas & Dargenidou (2009) investigate the effects of organizational culture and job satisfaction on quality service at Lisbon University in the world of higher education. The findings reveal that particular paradigms of culture are associated with service quality through the medium of job satisfaction. Also, Lee & Ahmad (2009) explore the potential influence of organizational culture on several variables: leadership behavior, subordinate commitment, job satisfaction, and organizational commitment and performance. It is worth stressing that Western laboratories and research groups have extensively probed into the correlation between organizational culture, job satisfaction, and organizational commitment. This sheds light on the extreme rarity of these kinds of studies in the national context despite the tremendous need. Accordingly, this dissertation is probably the first all-inclusive study that examines all these crucial variables in the Moroccan setting hence the exclusivity and originality of this research paper. Part of this paper aims at uncovering the effects of the universities' cultures on employees' attitudes, satisfaction, and commitment to their values and objectives. This paper assumes a mediation role of job satisfaction and organizational commitment between the relationship between organizational culture and organizational performance.

4 Total Quality Management, Job Satisfaction, and Organizational Commitment

A well-planned execution of total quality management can bring about considerable changes in organizations. These transformations can bear upon some of the most influential organizational behaviors, such as career satisfaction and employees' commitment. TQM implementation can alter the work environment and various aspects of quality management for better engagement and comfort of employees in the workplace. In this regard, Korunka et al. (2003) have been especially keen on assessing the outcomes before the alterations brought forth by quality management and the results observed at different intervals during the quality management strategy execution. The findings categorize employee outcomes according to various circumstances, thus depicting them as contextual outcomes. Indeed, the main target of implementing TQM strategies is to set up an adequate environment that motivates members to

do their utmost to achieve the organization's objectives. This work atmosphere guarantees high job satisfaction and triggers employees' creativity and innovation as they strive to solve problems and collaborate with workmates. It also fosters teamwork communication (Karia & Asaari, 2006). In this context, Deming (1986) puts the blame on management for plenty of quality problems in organizations, hence the need to have quality products if optimum excellence is sought. Teamwork has been highlighted in TQM plans. It has taken many shapes and forms in TQM. For instance, quality control (QC) and quality improvement of teamwork. The effect of collaboration during TQM execution has also been identified as a booster of motivation and effectiveness, highlighting job satisfaction (Rahman & Bullbock, 2002). Schlesinger & Heskett (1991) attributes job satisfaction to subordinates' conceptualization of service quality and their self-perception of service abilities. What is more, extensive research on employees' perceptions of the implications of TQM practices on job satisfaction has concluded that many aspects of soft TQM practices, namely customer focus and organizational teamwork, have noticeable impacts on job satisfaction. Meanwhile, most organizations recognize total quality management's significance to employee commitment to keep costs down and upgrade performance, service, and product quality. Accordingly, the success or failure of any TQM plan relies in the first place on the commitment of the top management (Sohal & Terzivski, 2000). Furthermore, affective commitment is very decisive when it comes to deciding to remain in the firm or not (Daily & Bishop, 2003). Lawler et al., (1998) argue that engaged personnel in the workplace demonstrate a higher inclination to be satisfied, which intensifies their commitment to the firms. There is a consensus that committed subordinates are extremely contributive to their firms' expansion and success (Karia & Asaari, 2006). Brooks & Zeits (1999) have undertaken a comprehensive investigation of the link between employees' commitment to TQM execution among healthcare personnel. The results have provided substantial evidence of the significant relationship between commitment and organizational outcomes. Nevertheless, several researchers have provided many counter-arguments regarding the so-called positive impact/link between quality management practices and employees' satisfaction and commitment. For instance, wood (1999) contends that many repercussions, such as high pressure and heavy supervision, may result from teamwork. TQM can lead to reversed outcomes if it is not well planned and does not involve all stakeholders, including managers and employees. This paper assumes a mediation role of job satisfaction and organizational commitment between the relationship of total quality management and organizational performance.

5 Organizational Performance, Job Satisfaction, and Organizational Commitment

The examination of the relationship between organizational performance (as a dependent variable) and job satisfaction and organizational commitment (as mediators) is an endeavour to account for whether the elevated levels of organizational satisfaction and commitment reflect on the increase of organizational productivity and performance or not. Besides, it sheds light on the presumed positive correlation between these three variables throughout the relevant literature. The focus on the major antecedents that upgrade employees' performance has been gaining more prominence in management theory and practice owing to the growing interest in human resources, and the important association between the amounts yielded consistent remuneration and the contentment of the personnel with the work conditions and their achievements. In this respect, Benkhoff (1977) highlights the positive link between job satisfaction, organizational commitment, and organizational performance. Tobing (2006) undertakes a study in which he relates commitment and satisfaction to performance. The results of this research provide evidence of the effects of the multiple dimensions of organizational commitment (continuance, normative, and affective) on the extent of satisfaction among employees. Furthermore, Meanwhile, Bastos (1993) holds that the scholarly investigation of commitment is more extensive than the examination of satisfaction. He contends that this finds justification in the stable nature of the commitment that qualifies it to be a predictive antecedent of human outcomes in the workplace. Concerning the impact of commitment on performance, it has been widely acknowledged that employees' commitment constitutes a crucial determinant of their engagement to accomplish organizational goals and optimize productivity and performance. In this regard, Shahnawaz & Juyal (2006) conceptualize commitment as the most integral factor to create a competitive performance. In this vein, Dirani (2009) considers organizational commitment as a primary indication of subordinates' output and organizational performance. What is more, Riketta's (2002) meta-analysis attempts to uncover the nature of the liaison between organizational commitment and job performance regarding the role of remuneration in boosting satisfaction. The findings confirm the central role of providing suitable recompenses in fostering job satisfaction. Besides, Zia Ud & Khan (2010) put under scrutiny the correlation between organizational commitment and subordinates' job performance and conclude that there is a significantly favourable association between these two variables. Baptiste (2008) comes to the same conclusion and states that there is a good rapport between organizational commitment and work performance. Concerning job satisfaction, it has been deemed a fundamental determinant of organizational performance. For this reason, managers

strive to establish satisfactory environments and provide motivating incentives to trigger positive feelings and attitudes on the part of the personnel towards their organizations. Indeed, businesses and companies show a general tendency to give priority to their human resources and consider them as strategic factors conducive to competitive performance. Correspondingly, Dugguh & Dennis (2014) hold in high regard the influence of job satisfaction on the performance of employees, and their welfare and productivity of the firms, efficiency, subordinate relationships, and turnover and absenteeism. Choo & Bowley (2007), who correlate satisfaction and job performance, have also established the direct link between satisfaction and performance. Similarly, Wright & Welfald (2009) study the indicator of happiness in one's job and its influence on outcomes and conclude that happy employees come up with high outcomes and tend to stick to their jobs. In this context, Robbins (2001) maintains that employees' happiness and feelings towards their work helps in boosting their performance of tasks in a remarkable fashion. Although job satisfaction and organizational commitment have been thoroughly investigated as driving forces of organizational performance for more than 50 years, many organizational psychologists contend that the so-called positive correlation between these variables has had a little, if any, substantiation. Wright & Welfald (2009), for instance, deny the existence of any universal generalization about employee dissatisfaction that can reduce complex issues such as turnover and absenteeism to manageable problems. A general overview of the literature on the relationship between job satisfaction and organizational performance demonstrates the weak statistical rapport between them. This has led to the conclusion that a subordinate's satisfaction has the best statistical predictability of performance (Iaffaldano et al., 1985). Likewise, Euske (1980) holds that there are ambiguous cause and effect relationships between these antecedents. He contends that the assumptions that satisfied employees perform well, or high-performing workers are already satisfied are not valid postulations. Thus, the controversial debate on the nature of the correlation between these three variables is an issue of continuing research and discussion.

Figure 20 illustrates the interconnections between the variables of this study and provides an overall summary of the causal paradigm that depicts the correlation between the independent variable (IVs) and the dependent variable (DV). Therefore, it gives a depiction of the liaison between organizational culture, leadership style, and total quality management as they bear upon the organizational performance of the Moroccan public universities. It is noteworthy that this conceptual framework sheds light on the direct effect that the independent (causal) variable has on the dependent (outcome) variable to account for how the latter is affected by the former.

Summary of the Conceptual Framework

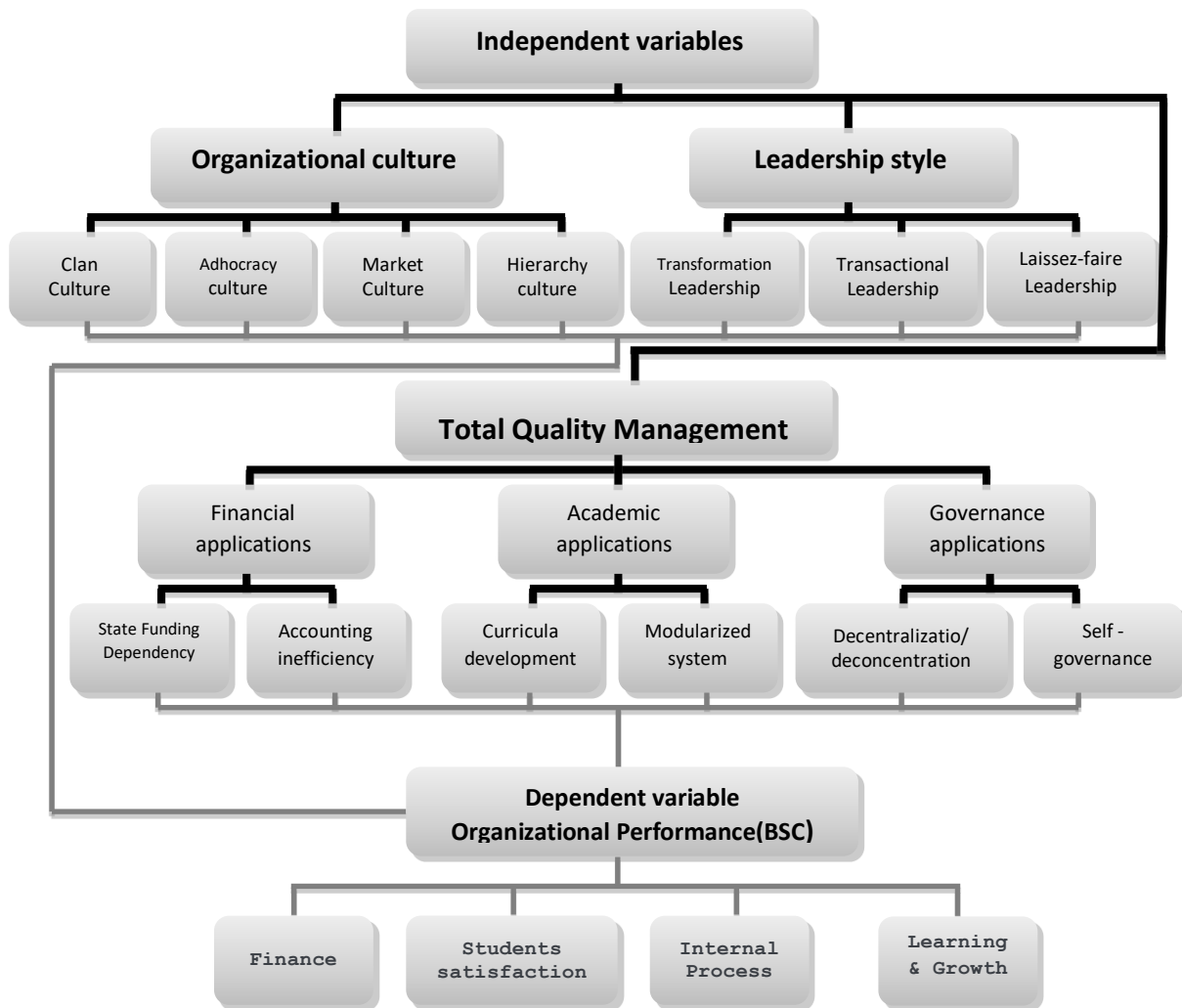


Figure 20: Summary of the Overall Research conceptual Framework

Meanwhile, the researcher deems it very necessary to incorporate other variables (mediators/intervening variables) to explicate the meditational mechanisms accounting for the indirect effect of the causal variable and the outcome variable. These are job satisfaction and organizational commitment.

6 Mediating Effects of Job Satisfaction and Organizational Commitment:

This paper introduces and puts into the test the mediating effect of job satisfaction and organizational commitment on the relationship between organizational culture, leadership style,

total quality management and organizational performance. The significance of this mediation is embodied in the integral role that the mediators play in enhancing the work environment, styles of management/leadership, and strategies of quality control, which reflect on the overall performance of organizations. This dual mediation is primarily derived from the deeply ingrained tradition in the literature and academic research relative to the depiction of the causal relationship between organizational performance and multiple variables, which are perceived as influential factors (e.g., leadership, organizational climate, organizational behaviour, job satisfaction and commitment, quality control/management, etc). In this regard, Suliman (2002) consolidates the general view in favour of the important mediating power of organizational commitment between the various variables related to the workplace and the variable of performance within organizations. He applies the mediated regression analysis to corroborate the diverse roles that commitment play between job climate and performance. What is more, Yousef (2000) undertakes a significant study in which he surveys several firms in the United Arab Emirates to account for the mediating function on the organizational commitment between leadership behaviours and job satisfaction and job performance-related outcomes. The findings substantiate the mediation strongly. Ying & Ahmed (2009) examine the impact of leadership style on job performance and conclude that organizational commitment does have a strong mediation role between these two variables. In a similar vein, Chen (2004) probes into the association gathering organizational commitment and job performance. The findings of this research confirm the mediating function of organizational commitment between the transformational type of leadership and job performance. Furthermore, Hu (2001) highlights the noticeable impact that organizational culture and leadership styles can have on the subordinates' job satisfaction. He contends that job satisfaction has a mediating effect on the relationship between leadership types and organizational culture, which bears upon organizational performance. Meanwhile, Tjiptono & Diana (2001) argue that total quality management (TQM) can only upgrade organizational performance by the medium of customer satisfaction, personnel commitment, the ongoing enhancement of the quality of the products, services, subordinates, internal processes, and organizational culture. McManus et al., (2004) pinpoint that the provision of quality services to internal customers has a substantial influence on job satisfaction, which results in the fostering of job quality and job effectiveness among many other outcomes. Bruhn (2003) maintains that employee retention and long-run financial progress can be achieved through internal customer satisfaction, as a significant prerequisite of TQM, which affects performance. In all, a great deal of the previously discussed studies probes into the relationship between these variables separately. In the meantime, the examination of

organizational culture, leadership style, total quality management, job satisfaction, organizational commitment, and organizational performance as part of the direct and indirect network of correlations has never been undertaken in one comprehensive study. Thus, this paper seeks to decipher and test these relationships in higher education based on a systematic methodology of research.

7 Multiple Mediation Model Testing:

In a single-mediator model, mediation entails the indirect effects that the predictor has on the dependent variable through the medium of one intervening variable. Meanwhile, the multiple-mediator model refers to the intervention of multiple mediators in the relationships between the independent variable and the dependent variable. Hayes (2013) advances that there are more sophisticated models of mediation (than the single-mediator model) that incorporate more than one mediator. These are referred to as parallel mediators. In such mediations, two or more variables (M1, M2, M3, etc.) are hypothesized to mediate the relationships between X (independent variable) and Y (dependent variable). These mediators are denied any reciprocal causal influence as they correlate with one another (Hayes, 2013). What is more, the main issue that needs to be investigated in any multiple mediations is the examination of the difference or change that mediators would cause to the correlations between the predictors and outcome variables (Edward & Lambert, 2007). The analysis of this type of mediation requires “simultaneous mediation by multiple variables” (Preacher & Hayes, 2008, p.880). By way of illustration of some prominent scholars that have used many mediators to conduct their studies, the multiple-mediator models of Aiken et al., (1994) stands out by using four mediators to examine how educational programs can be useful in boosting mammography (breast x-ray) for detecting breast cancer. Furthermore, Holbert et al., (2003) holds that the political ideology on women’s rights is mediated by three variables, namely watching the traditional drama, progressive drama, and situation comedies.

Accordingly, the current paper’s hypothesized mediation model has been elaborated based on Preacher & Hayes’ (2008) testing pattern that involves a two-step process to account for the indirect correlations. They suggest the analysis of the mediating effect of the entire set of mediators (to test total indirect effect) in addition to the testing of each intervening variable to break down the specific indirect effect.

7.1 Total Indirect Effect Testing:

This thesis' model adopts Preacher & Hayes' (2008) testing procedure. Thus, the coefficients stand for the indirect impact of the three proposed independent variables (organizational culture, leadership style, total quality management) on the two suggested mediators (job satisfaction and organizational commitment). The b coefficients refer to the influence that the two mediators exert on the dependent variable (organizational performance) while excluding the effect of the three previously stated independent variables (on the dependent variable).

The C paths indicate the direct impacts that the three predictors have on the outcome variable that is controlled for the presumed effect of the two mediators. Simply put, the C paths are the total effect of X_1 , X_2 , and X_3 on Y .

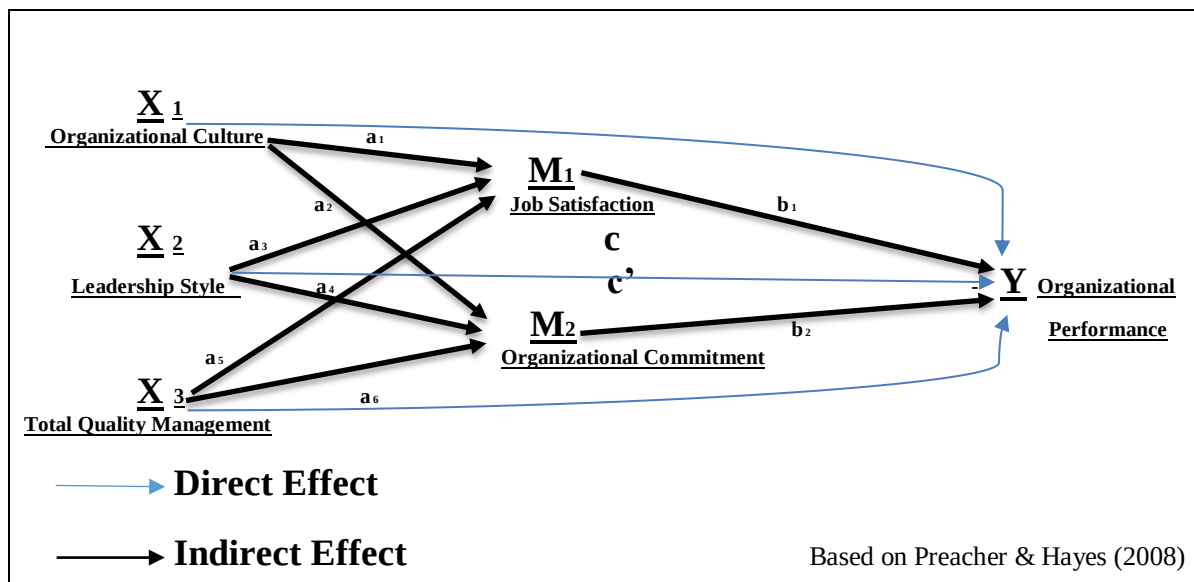


Figure 21: Hypothesized Multiple Mediation Model Testing

7.2 Specific Indirect Effect Testing:

As previously mentioned, to account for the specific indirect effect, there should be separate testing of each mediating variable. In this vein, Brown (1997) defines individual indirect impacts as the multiplication of the path coefficient. Accordingly, the indirect effect of the mediator job satisfaction (in correlation with organizational culture and organizational performance) is a_1b_1 – the indirect effect of the mediator job satisfaction (in correlation with leadership style and organizational performance) is a_3b_1 -- the indirect effect of the mediator

job satisfaction (in correlation with total quality management and organizational performance) is a_5b_1 –

Concerning the second mediator, the indirect effect of organizational commitment (in correlation with organizational culture and organizational performance) is a_2b_2 . The indirect effect of the mediator organizational commitment (in correlation with leadership style and organizational performance) is a_4b_2 – Finally, the indirect effect of the mediator organizational commitment (in correlation with total quality management and organizational performance) is a_6b_2 – The aggregate of this paper's indirect model is the sum of the two specific indirect effects:

- $M1 = (a_1b_1, a_3b_1, a_5b_1)$
- $M2 = (a_1b_2, a_4b_2, a_6b_2)$

The analysis and interpretation of the current mediation model results depend on the strength of the direct and indirect effects (Mackinnon et al., 2007). The mediation strength entails two levels of mediation (complete or partial). The determination of which of these types of mediation occurs depends on whether the direct effect disappears completely or remains significantly. In the first case, the disappearance of the direct effect denotes complete mediation. That is, the intervening variables exert full mediation in the impact of X on Y. Meanwhile, a partial mediation occurs when the direct effect does not disappear and remains with significant influence. That is, mediators, exert incomplete and partial mediation of the relationship between X and Y. In this case, X prediction of Y occurs despite the restricted mediation of M (Mackinnon et al., 2007). Therefore, two hypotheses underlying the indirect effects of the different variables are drawn from this study:

8 Mediation Research Hypotheses :

- *Hypothesis18: Job satisfaction mediates the relation between leadership style and organizational performance*
- *Hypothesis19: Organizational commitment mediates the relation between leadership style and organizational performance.*
- *Hypothesis20: Job satisfaction mediates the relation between total quality management and organizational performance*
- *Hypothesis21: Organizational commitment mediates the relation between total quality management and organizational performance.*

9 Chapter Summary:

The researcher has critically read up on the remarkably vast materials interweaving the primary trends and paradigms that fall within the scope of organizational performance assessment. The multidisciplinary nature of the subject matter has introduced the investigator to a probing inquiry into the wide-ranging schools of thought and philosophical patterns underlying the literature relevant to the thesis. On that account, five sections have been analyzed and synthesized to induce an all-encompassing conceptual framework and lay the ground for the empirical cross-examination. The inceptive section probes into leadership theory with a view to dissect leaders' behaviors and practices. The second component is devoted to organizational theory to inspect the construct of culture and its implications for higher educational institutions. The subsequent part covers a lot of ground regarding the theories, models, and applications of the total quality management (TQM) in tertiary education. The fourth element ponders on the balanced scorecard integration into HE performance measurement. The ramifications of these four factors on university performance assessment have been approached as well. Subsequently, the ultimate section details the causal paradigms underlying the general conceptual background depicting the nature of the interrelations between the independent, dependent, and intervening variables. Thus, the direct and indirect rapports are introduced and analyzed in light of the assumed change and influence that organizational culture, leadership style, total quality management may have on the Moroccan public universities' performance. The empirical framework draws its logical strength from the inclusion of the mediating variables, job satisfaction, and organizational commitment depicting the indirect influence. The mediation model proposes a three-path paradigm to provide systematic interpretations of the causal process involving the three types of variables (dependent, independent, and intervening ones) as well as a multiple-mediator model analysis to test the hypothesized mediation. The overall conceptual framework, including the target correlations, has been developed based on the detected gaps in the relevant literature; hence, the distinction and originality of this dissertation are guaranteed. The review wraps up all the perceived gaps in the literature and gives prominence to the exclusivity of the current thesis.

Chapter Two: Research Methodology

Introduction:

The initiation of the conceptual framework in the earlier chapter has set the ground for the construction of a thoroughgoing research methodology. The smooth evolvement from the hypothetical foundation to the empirical structure has been engineered in line with Creswell's (2003) depiction of methodology as a plan of action that bridges the research methods with their practical outcomes. Accordingly, this chapter lumps together the methods of inquiry related to the OCAI, MLQ, TQM, and BSC with their findings through the systematic implementation of a meticulously selected empirical procedure. Therefore, the methodological frame of reference has been designed as outlined below:

Mixed Methods

Methodology: a cross-sectional mixed-methods approach—quantitative & qualitative.

Philosophy: is based on pragmatism as a philosophical and methodological framework.

Research design: an explanatory sequential model (methodological triangulation).

Research Approach: - abductive reasoning that alternates between deductive and inductive approaches.

Research strategy: - cross-sectional survey.

Data collection methods : - Quantitative surveys : structured questionnaires.
- Qualitative surveys: semi-structured interviews.
- (Data triangulation).

Sampling method: - The quantitative research uses the stratified random-sampling method – a simple probability sampling technique.

- The qualitative research uses the purposive sampling method.

Variables operationalization: factors conversion

This proposed methodology has been subject to thorough examination and discussion to rationalize and support the procedural choices. Extensive critical argumentation of the congruence and applicability of the procedures has been developed throughout this chapter.

1 Mixed Methods Approach :

Meticulous browsing and synthesis of the vast literature on the mixed methods approach provides clear intersections as well as discrepancies between the many descriptions of this methodology. This is due to the diverse perspectives of analysis from which it has been described. While all the accounts converge at the merger of qualitative and quantitative methods, they diverge in the outlook from which this fusion should be carried out. The variation of viewpoints extends to the philosophical background, research design, research purposes, and data integration procedure. In this regard, the mixed methods approach has been perceived as a research design that entails multiple methods in one research (Tashakkori & Teddlie, 1998). Whereas, it has been deemed a mingle of techniques, approaches, methods, concepts, in one study (Johnson & Onwuegbuzie, 2004) and as combined data collection and analysis in another research (Plano Clark, 2005). What is more, the mixed methods are components of research design (Greene, 2007), or research program (Philips, 2009). Meanwhile, scholars have also dug into the philosophical paradigms to uncover how the mixed methods have been originated in the social sciences. Therefore, they have been the product of the pragmatic paradigm (Tashakkori & Teddlie, 1998). Qualitative methods are categorized under the constructivist paradigm, while quantitative methods belong to the positivist paradigm (Howe, 1988). Other researchers went deep into the approaches within the mixed methods. On that account, Johnson & Onwuegbuzie (2004) break down the uses of the mixed methods into induction (identifying patterns), deduction (assessing assumptions), and abduction (grasping outcomes based on the identification of the best set of explanations). In the meantime, the mere fusion of two methods to undertake research has been inadequate for some experts. They recommend the systematic integration of both qualitative and quantitative approaches based on a well-built research design. They have contended that the integration of data should be at three phases of the study: data collection, data analysis, and discussion. In this vein, Creswell, Fetters & Ivankova (2004) argue that integrating, connecting, or mingling data occur at some stage of the investigation process. Similarly, Tashakkori & Creswell (2007) advance that the hybrid approach collects, analyses, integrates the findings to come up with inferences. It is noteworthy that some scholars look at this methodology from the design angle and confirm that the type of research design governs the procedure of fusing both methods data. Accordingly, Kemper et al., (2003) depict mixed methods as a design involving qualitative and qualitative procedures to collect and analyze data in parallel form. This synchronous processing of data occurs in the sequential model design. Fittingly, the conceptualization and depiction of the mixed methods

methodology from different perspectives provide the researcher with extensive knowledge and alternative clues to select from and use in this study. This insight extends into the formulation of the research design of the thesis.

The insertion of the cross-sectional mixed methods in a research study should be rationalized at the methodological framework. Unsystematic inclusion of quantitative and qualitative approaches could cast doubt on the plausibility of its data and findings, and therefore, jeopardize the credibility of the whole research. This is in line with Truscott et al., (2010), who maintain that research cannot evolve by the mere incorporation of qualitative and quantitative methods in default of well-planned fusion and rationale (arguing for the mingle and inquiry). On that account, researchers have initiated several endeavours to methodize the combination process of both approaches by providing some essential purposes. Accordingly, Venkatesh et al., (2013) outline seven goals for an adequate rationalization of the adoption of the mixed methods. These are Complementarity, to receive reciprocal feedback concerning resembling experiences. Completeness, the entire embodiment of the experiences and associations, should be guaranteed. Developmental, to elaborate research questions starting from the findings of the precedent method. Expansion, to build on the delineations and insights generated from the previous approach. Corroboration/confirmation, to validate whether the inferences from a single approach are trustworthy, or not. Compensation, one method compensates for the shortcomings of another; Diversity, opposing feedbacks in relation to the gained experience or associations are received. The mixed-methods approach has proved itself as an asset to scientific research. It has provided researchers with diverse, flexible approaches to handle their studies. Indeed, a major benefit of this methodology lies in its capacity to approach research questions from simultaneous confirmatory and exploratory analyses (Teddle & Tashakkori, 2009). Additionally, it allows for triangulating data to appraise the consistency of the findings generated from various research instruments. Furthermore, multiple methods yield more robust inferences than a mono-method approach. Also, each method serves a different purpose from the other, which helps to provide a more comprehensive outlook on the research study.

What characterizes a methodological inclusion of cross-sectional mixed methods is the integration procedure throughout the research process. Otherwise stated, a systematic study would plan the points where qualitative and quantitative intercross to give sense to the hybrid findings. While the intersections of both approaches can occur at different intervals in the course of the research (Greene, 2007), the type and nature of this integration are predominantly

dictated by the purpose and rationale of conducting a cross-sectional mixed-methods investigation. Furthermore, the research hypotheses, the underpinnings, and features of mixed studies, as a third research methodology, should guide the initial phase of qualitative and quantitative fusion (Caruth, 2013). What is more, Creswell & Plano Clark (2011) maintain that the data combination process is contingent upon the philosophical background of the investigator as well as the nature of the inquiry. In the meantime, data collection, data analysis, and findings interpretation phases are designated as the primary intersections where data from both methods converge to strengthen the mixed outcomes. Indeed, mixed methods research goes beyond the simple collection of two separate strands of qualitative and quantitative data. It requires the congregation and convergence of both types of data strands (Creswell, 2010). Another major determinant of data integration procedure is the type of research design carried out in the cross-sectional mixed methods research. The significance of a given design lies in the procedural scheme and steps recommended by different typologies. In this respect, Creswell (2015) lists three mixed methods designs. These are explanatory sequential design, exploratory sequential design, and convergent design. Each of these research typologies gives priority to one method over the other; thus, making the integration process quite different from one another.

The relevant literature is rich with/of trials to assort research designs. Six types have prevailed educational research: Explanatory Sequential, to embark on research following a quantitative data gathering and subsequent qualitative data assembling to provide evidence and foster the first method results. Exploratory Sequential, it is the flip side of explanatory sequential, to begin research with gathering qualitative data targeting the inspected phenomenon followed by a quantitative approach to delineate the first method. Convergent parallel implies synchronous collection, fusion, and deployment of both methods. Embedded, concurrent assembling of qualitative and quantitative data. The aim is to contribute to the other design using the primary research design. Transformation, this is applied in a changing research setting within the suggested design in which one of the previously discussed types (explanatory, exploratory, convergent, and embedded) could be employed with the prospect of altering the research perspective. Multiphase, to probe into a subject matter from several previous studies. In a similar vein, Creswell & Plano Clark (2007) identify four mixed methods designs. These are Triangulation, which implies inserting qualitative and quantitative data to account for the research phenomenon; Embedded, which entails deploying and processing one of the methods data to provide explications to the research question from a qualitative or quantitative

perspective. Explanatory, which involves harnessing the qualitative approach to depict quantitative outcomes; Exploratory, which reverse the case of the explanatory design by operationalizing the qualitative method first and then incorporating quantitative data. This dissertation draws its fundamental research design from the preceding listed designs and adopts the explanatory sequential design all through the data collection, data analysis, and data interpretation stages of the research.

This study draws its key purposes for combining qualitative and quantitative approaches from the previously discussed rationales. Therefore, it adopts the complementarity process (as qualitative ones enhance quantitative data). Furthermore, triangulation techniques are implemented to ensure that the integration of the mixed methods data happens at the methodology and data collection stages of this study. Besides, a sequential developmental procedure is carried out, as this thesis applies an explanatory sequential course of research.

2 Research Philosophy:

2.1 Paradigm Identification:

For the current research philosophical and methodological frameworks, pragmatism provides the logical and procedural underpinnings for the implementation of the mixed methods approach. Identifying and positioning this study within the pragmatic school entails the pursuit of deeply-rooted traditions of an empirically-oriented methodology. The outstanding choice of the paradigm, based on the study's objectives and the investigator's knowledge and convictions, helps to provide a patent roadmap for the systematic development of the inquiry process. While every academic study holds a tacit or implicit paradigmatic predilection, it is scientifically sound to determine the research paradigm that bears significant implications on the methodology and interpretation of a given study (Gringeri et al., 2013). Meanwhile, the decision to select a congruent paradigm is not a random act. Instead, it should adhere to a justified choice built on a vast knowledge of the different models and their implications for/on the research. In this regard, the primary descriptions that give evidence for the utilization of paradigms have been assorted into four major stances. These are worldviews (points of view); epistemological stances; conceptualized patterns for conducting research; and agreed-upon concepts and beliefs among experts (Morgan, 2007). In this context, depicting a paradigm from a worldview perspective has been the predominant trend in social sciences. This is due to the comprehensive ontological, epistemological, methodological, and axiological stances; this paradigm provides for the research (Hall, 2013). In a similar vein, Greene & Caracelli (1997) advance three

pragmatic foundations upon which knowledge could be explored. They argue that inherent values and beliefs could be formed from

1. An ontological outlook underlying the conceptualization of reality, an epistemological basis that legitimizes knowledge, and
2. An axiological explanation of truth that involves ethical and rhetorical implications on the part of the researcher.

Indeed, a broader analysis of different paradigms leads to the conclusion that each possesses varied outlook of reality (ontological analysis), a unique conceptualization of the nature of knowledge underlying the perceived reality (epistemological analysis), as well as an adopted procedure to unravel that reality (methodological analysis). Moreover, a further depiction of the ‘worldview’ mindset has led scholars to outline four primary paradigms. These are post-positivism, constructivism, transformative, and pragmatism (Creswell & Plano Clark, 2007). What is more, Piele (1988) provides a broader categorization of these paradigms. He probes into the ontological and epistemological aspects of two types of philosophies. For that, he separates them into normative and empirical paradigms. Accordingly, positivism and post-positivism have been assorted under the empirical paradigm, whereas social constructivism, critical theory, and pragmatism have been perceived as normative paradigms. Each of these philosophies has distinguished features and prerequisites characterizing its methodology. The establishment of the philosophical paradigm would make the beliefs and assumptions underlying a study quite explicit and set the groundwork for researchers in their quests for the truth. This is in line with Tashakkori & Teddlie’s (1998) confirmation that paradigms are the embodiment of worldviews variance or systems of assumptions that direct the investigator’s resolution throughout the research process. Quite fittingly, the pragmatic standard provides the methodological and philosophical ground for the mixed methods approach of the current research.

2.2 Pragmatism:

The pragmatic choice of this research stems from the conviction that implementing either positivism or constructivism would not be sufficient to develop a thorough philosophical and methodological frame of reference for this multi-dimensional study. Although both paradigmatic stances contribute significantly to the adopted mixed methods approach, each provides a unilateral picture of reality. Alternatively, pragmatism allows for the systematic amalgamation of both paradigms to serve the collection, analysis, and interpretation of mixed findings. The pragmatic school has mostly been prioritized over other competing worldviews,

although mixed methods research can be approached from different philosophical doctrines. This paradigm defies the postulation that qualitative and quantitative approaches are incompatible and incongruent and appertain to different worlds. On that account, the positivist paradigm has been deemed inadequate by the constructivist worldview. This gap between the two paradigms has been abridged by pragmatism. The holistic mixed-methods alternative embraces the qualitative methods developed by constructivism and the quantitative methods derived from post-positivism. This denotes that pragmatism is a pluralistic approach that draws from both models to design an all-embracing methodology. The major refuting arguments advanced to discard the use of the post-positivist paradigm as a methodological underpinning for the current dissertation is embodied in its purely objective view of reality. Meanwhile, this study draws from the strengths of the positivist empirical orientation while carrying out practical research to examine the phenomena. What is more, the anti-speculative nature of this paradigm gives credibility to its findings that are derived from empirical procedures undertaken to unravel intricate and complex issues. In this sense, positivists hold the view that the objective reality is the outcome of the systematic experimental implementation of methodological procedures. Furthermore, the proposed quantitative approach suits perfectly the objective of this research to generalize the findings related to the performance of higher education. This denotes the adherence to a well-defined methodology that begins with stating the research problem and postulations, through providing and verifying them and ends with the conclusion (Xinping, 2002). Concerning the research design, the explanatory sequential falls at the heart of pragmatism. Another attribute of pragmatism is the systematic deployment of measurement and instruments to uncover the cause-effect interrelations. These metrics serve this thesis' assessment objectives on a silver platter. The leadership-subordinate relationships entail professional interactions that are away from being objective. Besides, organizational culture involves a subjective environment in which stakeholders and members exchange and interplay emotionally. Therefore, the inquiry of these phenomena from a positivist perspective would rather be inadequate. Likewise, this study conceives the constructivist paradigm as a tradition that deals with reality from a purely realistic subjective standpoint. Reality is constructed and experienced in social settings where people interact and share feelings. This worldview provides a subjective and independent depiction of truth. This could affect the research data and lead to misapprehension and misconception of findings. In the meantime, this study takes from the constructivist paradigm by including the qualitative method. It allows a multi-perspective examination and analysis of the phenomena and accounts for the narrative side of the scientific interpretation as opposed to the empirical one warranted by the qualitative

approach. A major inadequacy of the constructivist and post-positivist paradigms lies in the one-sided (objective or subjective) perspective that each provides to account for reality. This denotes that building research on the methodology of one of these findings would yield partial and biased results. Indeed, results from the post-positivist pattern tend to be epistemologically disassociated and unable to scrutinize some phenomena with/of interactive and subjective nature. Meanwhile, the constructivist findings are readily prone to misconception and misinterpretation due to the reciprocity of influence between the researcher and the researched subject on the ultimate outcome. Concerning the exclusion of the transformative paradigm, it finds its justification in its similarity and resemblance to/with pragmatism. This raises the dilemma of whether the transformative paradigm is a discrete and separate framework or just an extension of/to the pragmatic research (Biddle & Shafft, 2015).

3 Argumentation, Rationalization, and Implementation of the Pragmatic Mixed Methods Research:

The arguments, rationales, and practical applications of pragmatism entail epistemological, ontological, and methodological considerations just in the same way that post-positivism, constructivism, and transformative paradigms have been counter-argued. Thus, pragmatism starts from contrasting epistemological grounds of those adopted by the positivist and anti-positivist paradigm. On that account, pragmatists refute the positivist claims based on objectivity, falsification, necessary experimentation, etc., and deny anti-positivist claims assuming that any theory can do the job. The ontological argument in favour of the pragmatic approach evokes the realistic subjective-objective realities. In this line, Morgan (2007) maintains that research should not be polarized into objective and subjective research (as extensively discussed in the organizational culture section, p: 13-17). Although the subjective analysis is the predominant, objectivity finds its place in pragmatism. Scholars belonging to this school are not very interested in delving into the epistemological inquiry of reality to figure out the theoretical origins of knowledge or the ontological aspects of truth to fathom rules and nature of reality. This connotes that the practical orientation of this paradigm centres on the research problem and question (Creswell, 2003). For pragmatism, truth is substantiated by objective observation of predicted behaviour. Being pragmatic entails the exploration of ‘what works’ and the generation of workable resolution to research problems (Creswell, 2003). It goes beyond the controversial debate involving truth and reality issues and delves into a more massive practical scrutiny of multiple realities (Rorty, 1999). Fishman (1991) states that the pragmatic thought is associated with finding practicable and feasible elucidations to be intricate

and perplexing issues. Such descriptions underscore the practical nature of pragmatism. Indeed, this pattern is an isolation from the purely theoretical and philosophical underpinnings underlying most competing paradigms. Thus, an assertion is considered accurate when it works. In this vein, the pragmatist Rescher Nicholas (2001) characterizes the pragmatic, workable, and empirical outcomes as standards for the truth and conducts of action and value appraisals. Morgan (2014), who refers to the pragmatic conceptualization of the nature of knowledge either as phenomena that can be clarified by observation or subjective meanings or together, has made the epistemological argument quite explicit. Both can generate plausible and legitimate insight building on the goal or the research question. Similarly, Johnson & Gray (2010) advocate the use of pragmatism as a foundation for mixed methods research. These scholars make their philosophical choice by embracing dialectical pragmatism that enables them to generate practical and achievable answers to the research problems. In this study, the implementation of the pragmatic approach means the intermingling of subjective-objective knowledge in a predetermined sequence. Therefore, this research begins with the objective/quantitative analysis followed by the subjective/qualitative investigation.

The pragmatist mixed methods approach has been favoured by most researchers owing to its articulation of the empirical effect in providing a methodological assessment of the utility of fusing different methods in one research study. In this regard, the methodological argument related to pragmatism has been associated with the objectives, questions, and reasons for mixed methods deployment (Creswell & Plano Clark, 2007). This last argument has a significant implication for/on this dissertation research methodology. Thus, the cross-sectional mixed methods research methodology has been executed and integrated at various levels of this research process. The generation of empirical and action-oriented findings from a predetermined sequencing underlies this research pragmatic mixed methods methodology.

The rationalization of the pragmatic mixed methods approach has been a priority for many scholars who advocate the adoption and implementation of this philosophical doctrine. In this respect, many researchers have proposed three methods to provide the rationale for this two-paradigm integration as an alternative for the so-called inconsistencies between qualitative and quantitative approaches. These are a-paradigmatic stance, multiple paradigm approach, and a single paradigm approach. Correspondingly, Greene (2007) lists five underpinnings :

1. The a-paradigmatic view that dissociates paradigms from methodologies.
2. The alternative stance that strives to bring forth novel mindsets underlying practical methodological issues.

3. The complementary strengths stance that highlights the divergent, yet complementary nature of different methodologies.
4. The substantive stance that perceives clear interconnections between paradigms and the substantive perspective.
5. The dialectic approach that draws from the existing disparities between distinct methods to generate holistic knowledge.

Besides, Datta (1997) suggests three basics for a pragmatic mixed-methods formulation of research design. These are embodied in

1. Practicality that comes from the personal knowledge of what is workable or not,
2. Contextual responsiveness to different contingencies that surface during the research process, and
3. Consequentiality that refers to the decisions that a researcher makes contingent upon empirical effects.

For the implementation of the pragmatic mixed methods, Laughlin (1995) provides a matrix or a methodological framework to account for its systematic operationalization. He starts from the fact that most researchers encounter the impediment of transiting from theory to the methodological procedures. This should be undertaken with expert and well-planned alterations. To overcome this obstacle, Laughlin (1995) suggests a conceptual framework to provide consistent and systematic implementation of the pragmatic mixed methods research. He identifies three dimensions underlying a research procedure. These are theory, methodology, and change choice. Accordingly, he argues that theory stands for the basic theories that help the researcher to formulate a clear perspective regarding the nature of knowledge. Methodology involves the procedural steps that a researcher follows while carrying out an investigation. The change choice perspective that hints at the researcher's attitude and the decision whether to change or maintain the status quo of the researched phenomena. By proposing this methodological framework, Laughlin (1995) makes quite explicit the ontological, epistemological, methodological, and axiological aspects of pragmatism as a basis for the embracing and implementation of the mixed methods approach.

4 Explanatory Sequential Research Design:

A design denotes the research ground plan or blueprint that helps to execute the outlined procedures of the research study. Concerning the cross-sectional mixed methods research design, it is perceived as an approved approach of integrating qualitative and qualitative methods in a single research. As previously theorized, the integration of quantitative and

qualitative methods can be planned at multiple levels of the research process. Therefore, they can be incorporated at the research design, methods identification, and findings interpretation (Fetters et al., 2013). The research design is primarily determined by the nature of the research problems, assumptions and, goals. Accordingly, drawing from the predominant literature and earlier studies, this thesis implements a mixed-method explanatory sequential design. Creswell & Plano Clark (2007) hold that this type of research design is highly sought for when the study is directed towards a thorough depiction of the quantitative results, subsequently supported and enhanced by qualitative findings. The emphasis is on the explanation and elaboration on the quantitative data (Creswell & Plano Clark, 2011). This is in line with the quantitative nature of this study research problem. This design is convenient with the research, which seeks qualitative knowledge to enhance on and delineate significant quantitative results (Tashakkori & Teddlie, 1998). What is more, qualitative data helps to provide complementary insight to enrich the quantitative one. The former method is utilized to contextualize the latter (Creswell et al., 2003). Clearly, priority is given to the quantitative approach (over the qualitative approach) while undertaking an explanatory sequential inquiry (Creswell & Plano Clark, 2010). Accordingly, a four-phase (procedures) sequential explanatory design has been executed for the current research data collection, analysis, and triangulation based on insights from the guidelines proposed by Creswell & Plano Clark (2007).

During the initial procedure, quantitative cross-sectional sectional surveys have been administered. The researcher has distributed the OCAI, MLQ, BSC, and TQM questionnaires to the participants during a specific point in time. The SmartPLS software has been deployed for data analysis. The results of the first level of the sequential design have been intermingled with the preliminary qualitative data to formulate the research questions for the survey interviews. This second procedure has been crafted in line with Creswell & Plano Clark (2011) assertion that data generated from a sequential design can be fused employing connecting, merging, embedding, or building processes. Therefore, joining both methods has enabled the investigator to have a clear idea concerning the target participants.

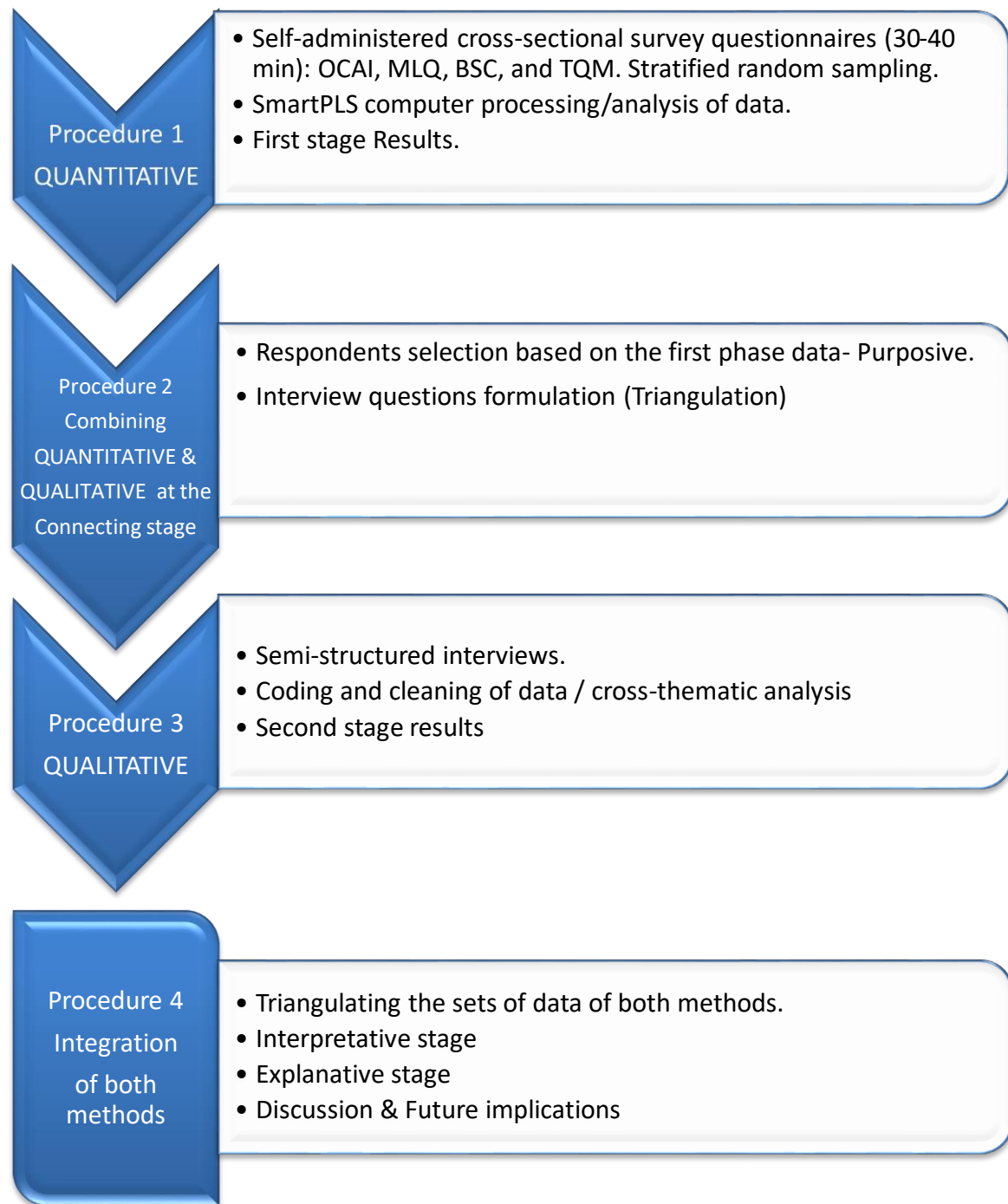


*Figure 22: The Current Research Study Explanatory Sequential Design & Triangulation.
Based on Creswell and Plano Clark (2007).*

The subsequent procedure is a qualitative gathering of data through semi-structured interviews (developed based on the insights from the first quantitative phase). During this procedure, coding and cross-thematic analysis of the generated data has been carried out. Results from this stage have been converged for the last step of this research. The last integration point has occurred through triangulating the qualitative set of data on the

quantitative one. This has provided the ground for a holistic interpretation of the combined results and allows for a comprehensive explanation of the mixed findings. The goal is to come up with meta-inferences or a general understanding of both strands (Teddlie & Tashakkori, 2009). This also paves the way for an extensive discussion of the outcomes and projection of future implications on the research in this subject matter.

5 Research Approach:

The research approach – the research logic- followed to carry out this study’s methodology is abductive reasoning. The pragmatic abduction undertakes an inquisition procedure that alternates between deductive and inductive approaches. The abductive inferential process had been elaborated and enhanced by the author and creator of pragmatism Charles Sanders Peirce (1882-1993) after a thorough reexamination of induction-deduction dichotomy. The pragmatic conceptualization of abduction brings together the deductive course of thought embodied in the quantitative authentication and the inductive exploration entailed in the qualitative inspection (Johnson & Onwuegbuzie, 2004). Both logics have straightforward implications for the pragmatic mixed methods of this thesis. Fittingly, this research deploys the three modes of reasoning: the deductive syllogism is typified in the quantitative hypothesis testing and theory assessment; the inductive inference is deployed in the thematic examination of qualitative research, and the abductive pattern that provides inferences to the adequate elucidation from a variety of alternative accounts.

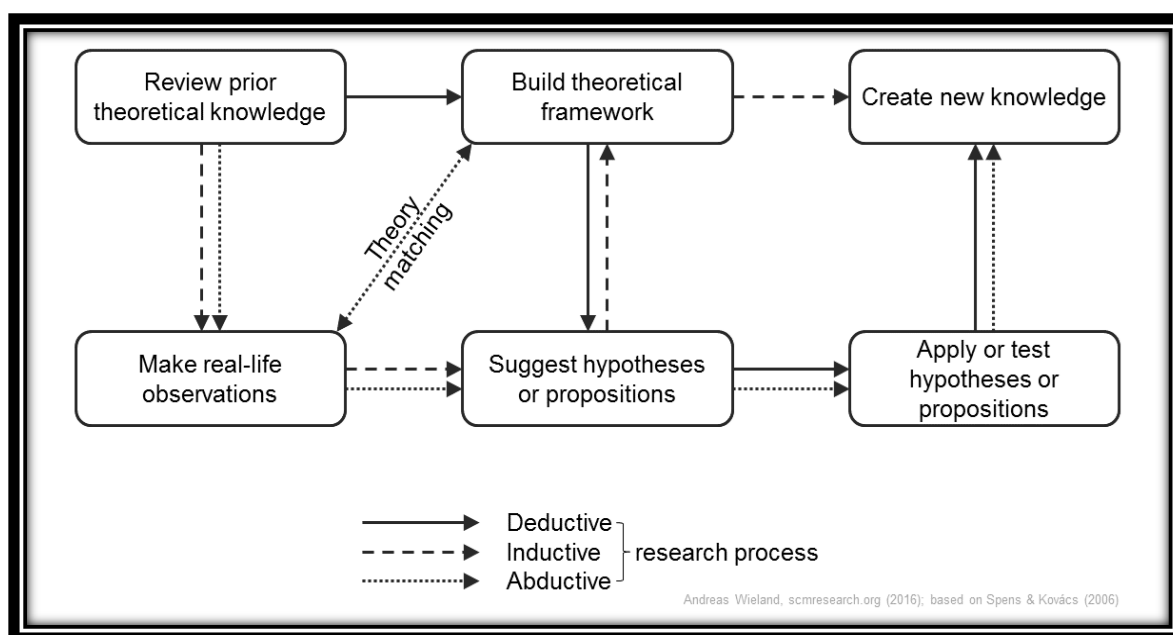


Figure 23: Abductive, deductive, and Inductive Research Process. Adopted from Andreas Wieland scmresearch.org (2016); based on Spens & Kovács (2006)

Figure 23 provides illustrations concerning the three modes of reasoning while undertaking a research process. Abduction is a research logic that entails the development of theories from real-life observations after examining and synthesizing the relevant theoretical knowledge. It is from what the researcher considers fact that hypotheses are constructed. Thus, the conceptual framework is drawn from selecting the most pertinent and influential theories that contribute directly to the building of assumptions (after overviewing and screening the generic body of literature). Subsequently, hypothesis testing is undertaken to vindicate or falsify the propositions to generate new theories.

Deductive reasoning embarks on research by determining the theoretical and conceptual frame of references (from reviewing the pertinent body of literature), which are then put to the test and assessment through deducing observations of empirical nature. The deduction begins with the general, through the incorporation of the specific subject, to the confirmation of the case. The significant contribution of the deductive process lies in its implementation of already assessed hypotheses in a new hitherto unexplored contextual setting. This is particularly beneficial with thoroughly accounted subjects where valid and tested conceptual frameworks set the ground for current research. Investigators who adopt the deductive line of reasoning possess a prior conviction that the process of data collection and hypothesis testing would yield logically substantiated analysis and evidence that reinforces the initial proposition. This denotes that this is a conclusive approach with quantitative bearings on research through the undertaking of systematic measurements. A deductively designed research entails a quantitative objective assessment of theories. It seeks to achieve generalizations from the findings to provide statistically corroborated cause-effect elucidations.

The inductive logic is derived from an already established theory that accounts for the investigated phenomenon. Predictions from the theory are formulated to examine the researched subject. Final observations are put forth to decide whether the outcomes related to the phenomenon corroborate the initially studied hypothesis or not. The line of reasoning of this approach examines disintegrated minutiae to form the big picture of a given situation (Dewey, 1933). Thus, this process aims at collecting data to put forward patterns, demonstrate inadequacies and convey meanings, rather than validating or falsifying the proposed theories. This pattern of research seeks to generate theories inductively. It uses qualitative data to provide subjective depictions and explanations of the phenomenon. Thus, generalizations are drawn from particular instances or observations. The purpose is to come with an adequate account to explain the investigated subject matter. Pierce prompts researchers to make use of abduction,

deduction, and induction altogether to come up with a comprehensive explanation of the investigated phenomenon. He provides a thorough description of the three logics in which he considers that deduction proves that something must be; induction shows that something actually is operative, abduction merely suggests that something may be (Pierce, 1955). These depictions suggest the necessity to integrate the three processes in one research to generate a multi-perspective logical analysis of the thing under study. What is more, the combination of the inductive and deductive methods through abductive reasoning occurs in a sequential ordering (Ivankova, Creswell & Stick, 2006). On that account, the implementation of a selected sequencing allows researchers to strike a balance between the two alternatives through the abduction medium that bridges the gap between the extremely polarized logics. This is entirely in line with the explanatory sequential design of this research. Accordingly, deductive/quantitative objectives are achieved by providing the necessary inductive/qualitative inputs. It is noteworthy mentioning that this study draws from the relevant literature to identify abduction as the process that leads to the development of hypotheses of explanatory nature (in contrast to exploratory or descriptive assumptions). This connotes that the proposed theories explain interrelations between variables using statistical inferences. Besides, it seeks to undertake systematic quantifications of the cause-effect relationships underlying different antecedents. A hybrid model has been developed by the current researcher based on Peirce's extensive theorizing on the methodology of scientific research along with the exhaustive accounts of the three logics from the literature. The resilient nature of abduction as a reiterative procedure (repetitive movements back and forth across the logics) has enabled the researcher to design a model that suits the current study explanatory (somewhat descriptive) nature and objectives. This follows suit of Johnson & Onwuegbuzie's (2004) tailored deployment of abduction as a tool to justify the results- in contrast to the generally agreed-upon tradition of using abduction in the outset of research to formulate hypotheses. The model shows two levels of abduction activation: (a) at the beginning of the research where a deductive synthesis of theories has been followed by an inductive formulation of hypotheses; (b) at the results level where abductive steps depend on the confirmation or falsification of the hypotheses. Accordingly, in case that the hypothesis is proven accurate, the researcher shifts back to the deduction stage- this aims at proceeding to repetitive phases of deduction, entailing new consequences of the hypotheses with subsequent reassessment (for new consequences). In case the hypothesis is rejected (falsified), a shift back to abduction is then necessary to formulate new hypotheses building on the accumulated insight from the first experience.

While the inferential process is characterized by manifest alternations of the three lines of reasoning, the nature and purposes of this study give evidence of these rotations. Correspondingly, the nature of the subject matter entails extensive observation, analysis, and synthesis of the strikingly diverse bodies of literature to generate the four conceptual frameworks underlying the formulated research propositions. Hypothesis building is the primary concern of this phase.

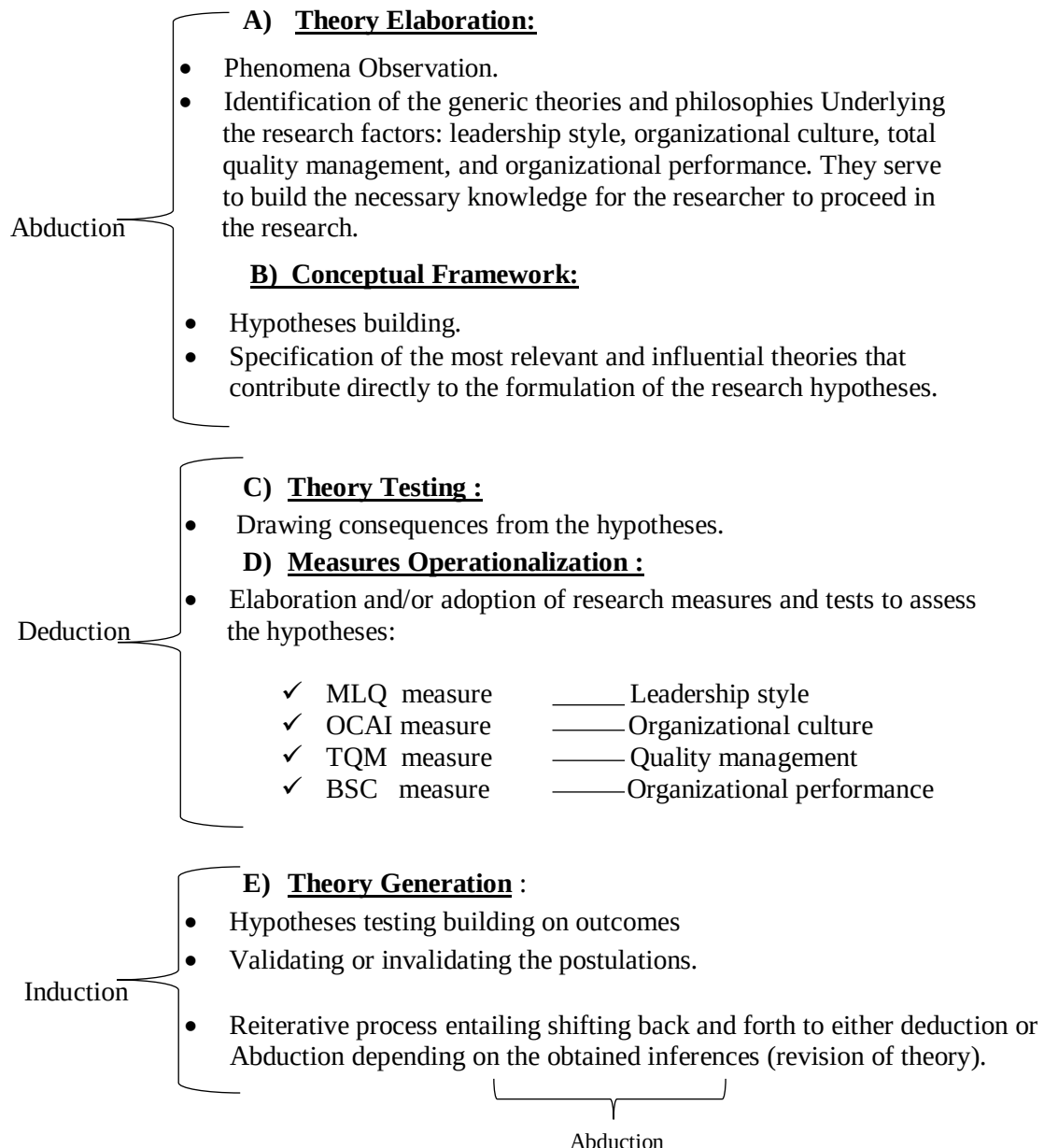


Figure 24: Abduction Process Mode
Based on the current research

This initial abductive stage sets the ground for the subsequent deductive step, which involves the testing of these hypotheses. In this level, the investigator has decided on the four measures to assess the postulations. Drawing consequences from these assumptions are the primary objectives of this part of the process. In the meantime, it is of extreme importance to operationalize the research variables (by making them susceptible to statistical quantification) prior to the hypotheses testing step. By so doing, research indices and measures are elaborated and made ready for the assessment procedure. The last stage is concerned with the validation or falsification of the hypotheses. The abductive process is reactivated (as detailed earlier), depending on the results.

In all, this research draws its inferential process from Peirce's (1934-1960) perception of the individual implementation of deduction or induction as an insufficient condition to ensure a comprehensive grasp and study of the phenomenon. While both logics make significant contributions to research, Peirce proposes the third line of reasoning to account for the inadequacies and shortcomings of these approaches. Therefore, this study draws from the holistic feature of abduction to construct a hybrid model that entails the three modes of inference to carry out the mixed methods methodology with reiterative feedback at different intervals of the thesis. Therefore, in the current research, the abductive mode insinuates a heavy focus on the deductive process (starting with the quantitative-objective survey) followed by inductive inquiry (qualitative-subjective interviews) to enhance on the first stage while getting repetitive feedback and insight from both logics following the obtained results.

6 Research Strategy: Cross-Sectional Survey

Considering the compound methods of this study, a cross-sectional survey has been crafted for the systematic collection of data. The preference of the survey research strategy over a wide selection of strategies, namely experiment, case study, ground theory, action research, and ethnography (Saunders et al., 2009), has been in line with the delineated objectives of this dissertation. For this thesis, mixed methods research is an adequate methodology for carrying out qualitative and quantitative surveys. It would provide comprehensive coverage of the multi-dimensional nature of this study's subject matter. It is deemed that the survey strategy has a unique possibility to account for higher education performance-based on designated population (managers, administrators, academics, etc.) in predetermined settings (universities) during a particular point in time (the duration of data collection). The subsequent value-added of this strategy to the current study is drawn from Byrne (2002), who maintains that surveys provide

the asset of considering different variables simultaneously and concurrently in research. In the context of this study, the prime justification for the adoption of the survey lies in the neutral observation and examination of the relationships between variables in default of any systematic manipulation or control of the factors. Therefore, dependent, independent, and mediating antecedents are deployed in such a way that elucidates the scope of the study without any interference on the part of the investigator. A survey can use many forms of data collection, namely, personal interview, questionnaire, panel, telephone, and observations (Kerlinger, 1973). Herbert Mc. Closky (1969) provides a description of the survey as any procedure in which data collection is systematically undertaken from a population or a sample through some form or direct solicitation, such as face-to-face interviews, telephone interviews, or mail questionnaires. The current research strategy starts with the self-administered quantitative/deductive survey questionnaires followed by face-to-face qualitative /inductive survey interviews (in proportion to the previously discussed explanatory sequential design and the abductive approach of this thesis) to deduce generalizations from the findings based on the surveyed sub-samples.

The current research strategy fits into the cross-sectional type of surveys, which is quite distinct from its longitudinal counterpart. Both mixed methods designs are well-reputed in social science. Meanwhile, the points of discreteness between these two researchers lie in the time factor and the frequency of carrying out each research process. Otherwise stated, while the longitudinal mixed-methods entail an observational process to depict the alteration-taking place at different intervals over time, the cross-sectional mixed-methods deduce inferences from phenomena observation at one point in time. In cross-sectional studies, investigators do not keep track of the researched phenomena over time; instead, they merely observe and discern the prevalent exposure occurring at a particular time. This category of studies requires a snapshot collection of the data. This denotes the disregard of the time dimension as this factor insinuates the specific time at which or around which the data are collected. The time of data collection could extend from a day or two to several weeks or even more. It is an approximate 'point in time.' The temporal implication of this type of research may tolerate the incorporation of past information, yet its primary focus is on the present data. A cross-sectional survey can have analytical or descriptive functions. While a descriptive design places emphasis upon the prevalence or the description of the proportion of selected features in the population, an analytical approach targets the depiction and assessment of associations among various criteria. Therefore, it is the appraisal of the association between outcomes and risk factor (exposures) that determines the nature of the cross-sectional study. A key concept in the survey is

‘prevalence’ that connotes the examination of the proportion or frequency of specific characteristics in a given population. In this particular research context, it is more significant to account for associations between variables and the causal processes generating them than to probe into the rate and magnitude of their occurrence (prevalence). Correspondingly, it has been in the researcher’s intention to provide analytical accounts of the incidence of the causal effects of leadership style, organizational culture, and total quality management on organizational performance at a given time. The analytical nature of the current survey fits perfectly the explanatory purpose of this thesis. The research strategy and design serve to elucidate the cause-effect associations entailing the variables.

7 Data Collection Methods:

This study has implemented a survey research method to gather data from three Moroccan public universities. The present thesis integrates four quantitative instruments of data collection. These measures fall within the extensive philosophical and empirical scopes framing their selection and validation in one holistic survey framework. The utilization of several scales can be a challenge if inadequate literature framework sets the ground for their implementation, or if they have been designed in such a way that impedes achieving the major objectives of the research. However, the deployment of multiple measures that serve the same purpose (e.g., the quantification of organizational performance from numerous angles) would provide a 4-D depiction of the cause-effect correlation governing different variables. This is in line with Tang & Yeh (2015), who maintain, “Scales are important in designing a survey instrument in management research. As no single measure can precisely capture all aspects of behavior, researchers usually combine two or more measures into a scale to gauge each variable.” (p. 467). This has a bearing on this study’s dependent variable organizational performance that requires multiple interrelated scales such as leadership, organizational culture, total quality management to uncover its complex and multi-dimensional aspects. Accordingly, a self-administered survey has been handed out for data collection on the four mentioned constructs. The MLQ questionnaire is utterly adopted from the original developers. Meanwhile, three of the questionnaires have been subject to change and adjustment to meet the requisites of the research. Therefore, partial modification of the OCAI (to assess organizational culture) has been undertaken concerning the rewording of the genuine items and the inclusion of others related to higher education context. As for the BSC and TQM questionnaires (to assess performance and quality management, respectively), they have been elaborated by the researcher based on their original underlying dimensions.

8 Research Instrumentations :

8.1 Quantitative Data Collection: Four Structured Survey Questionnaires

The suggested survey questionnaires have been conceived to cover five sections. The inaugural section comprises an invitation letter and respondents' demographic data. The second part concerns the OCAI questionnaire. The third component holds the Multifactor Leadership Questionnaire (MLQ 5x-short) Leader/Self and Rater forms. The third questionnaire deals with quality management issues in higher education. Ultimately, the last section is devoted to the Balanced Scorecard questionnaire. Psychometric authentication of each of these scales, which constitute the four major tiers of this research has been carried out either by drawing evidence from the pertinent literature or by conducting validity (factor analysis testing) and reliability (Cronbach's Alpha coefficient) computations, or both. A detailed account of the divisions of the survey is as follows:

8.1.1 Section A: Demographics

The demographic survey is addressed to the two-sample categories of this study. The first part is devoted to the top executives and university leaders. It collects data related to their management position, name (optional), gender, and age. The second part concerns the employees and subordinates of the higher educational institutions. It gathers data related to their gender, age, institution, degrees, and the number of years in the current position.

8.1.2 Section B: Organizational Culture Measurement

Organizational Culture Assessment Instrument (OCAI).

The Organizational Culture Assessment Instrument is a survey questionnaire with a five-point Likert scale in which six categories are assessed. Each of these six dimensions comprises 4 alternatives and 24 items. The respondents should rate their organizations by assigning points up to 40 to each option. The lowest score to be given to any choice is 10. The total of all alternatives should be 100. The rating relies on the respondents' perception of how each selection describes the culture of their organization. Furthermore, the participants are required to fill in the two columns of the OCAI. The first column assesses the current culture of the organization while the second column projects the desired or the future culture.

The total of the OCAI requires two simple arithmetical computations. The first one necessitates the totalling of individual outcomes of each alternative. For instance, adding all 'A'

responses before dividing them by six to account for the clan culture, and adding all 'B' responses, and then dividing them by six to assess the adhocracy culture and so forth. The second one is the summing of the overall culture profile by aggregating the six dimensions of the OCAI.

8.1.3 Section C : Leadership Measurement

Multifactor Leadership Questionnaire (MLQ- 5X)

Based on the psychometric reports and the earlier account of the Full Range leadership (p.57), this study deems the MLQ 5X (Avolio & Bass, 2004) the optimal research instrument for the quantification of the Moroccan public universities' leadership style and leadership performance. Therefore, a wide assortment of leadership styles is put to the test by the questionnaire. This broad selection comprises the types of the leaders who provide incentives and contingent rewards to their associates to entice them to perform better, and leaders with transformational qualities who work towards the empowerment of their subordinates and enable them to assume leadership responsibilities in their turn (Furunes et al., 2012). The genuine version of the questionnaire consists of three sections: the first part entails a description of the respondents; the second section weighs the three styles of leadership; the third section quantifies leadership outcomes. The MLQ 5X has primarily been administered in many empirical studies, in particular, to account for correlations gathering leadership styles and other variables. This measurement instrument deploys 45 items split into 36 scales serving to assess the nine leadership components underlying the full range of leadership. On that account, the transformational factor is typified in five elements. These are Idealized Influence – Attributed, Idealized Influence – Behaviour, Individual Consideration, Intellectual Stimulation, and Inspirational Motivation. Meanwhile, the transactional leadership depicts three subscales: Contingent Reward, Management-by-Exception (active), and Management-by-Exception (passive). Finally, the non-transactional is assigned one subscale, which is Laissez-faire. What is more, since the MLQ 5X has been elaborated with the intent to quantify leadership and its outcomes, OUT been incorporated into the model for further assessment. These are Effectiveness, which comprises four items; Extra Effort, which includes three items; and Satisfaction with the leadership that involves two components. The accumulated findings from these twelve scales give insightful data reporting about the most optimum leadership style for the organization.

The MLQ 5X integrates two forms: The Self Rating Form (or the leader form) and the Rater Form (or the subordinates form). The first form has been developed for executives and managers to rate their leadership behaviours and practices as they perceive them. Leaders assess the frequency or the degree at which they devote themselves to a comprehensive list of behaviours vis-à-vis their followers. The second form is addressed to subordinates to rate their superiors' behaviors. Both forms of the MLQ 5X have been handed out as part of the thorough survey, which tackles higher education leadership practice from the decision-makers and associates' perspectives. The scales consist of 45 items each, rated by leaders and subordinates according to a five-point Likert-type scale as follows: 0= not at all, 1= once in a while, 2= sometimes, 3= fairly often, and lastly 4= frequently, if not always. The findings from the MLQ 5X survey are processed following the scoring key proposed by the developers (Avolio & Bass, 2004). Accordingly, each survey data is attached to the various components for the sake of generating outcomes for an accurate measurement.

8.1.4 Section D : Total Quality Management Measurement

Total Quality Management (TQM).

This research TQM questionnaire aligns Financial, Academic, and Governance autonomy applications with the most effective management practices in the literature. The objective is to track down the extent of their implementation in higher education institutions in Morocco. For this purpose, the author has elaborated a 5-Likert scale (5= strongly agree; 1= strongly disagree) comprising 29 items divided into three clusters. The first one, Financial autonomy/applications, involves 13 items that ponder on the management of the financial funds (either state funds or extra revenues) in the university. The second cluster is entitled Academic Autonomy/applications and consists of 10 items delving into the margin of the academic freedom granted to the university. This includes how the university manages its academic affairs as well as the prerogative that individual academics enjoy to carry on their scientific projects, lectures, and studies. Concerning the last cluster, it probes into Governance autonomy/applications through 6 items that intersect with the university governance mode and the internal governing board's performance.

8.1.5 Section E: Organizational Performance Measurement

Balanced Scorecard (BSC).

The questionnaire seeks to weigh the respondents' general knowledge of balanced scorecard and university implementation opportunities in prospect. This 5-point, Likert scale suggests 51 items. The scoring method of the measure is a 5-1 key of rating (5= strongly agree; 4= agree; 3= neutral; 2=disagree; 1=strongly disagree). The scale consists of six sections fitting the four dimensions of the BSC. The first section inquires about whether the respondent is cognizant of the balanced scorecard and its perspectives or not. Furthermore, it explores the existing performance measurement in the university. The subsequent section holds four items with the intent to introduce the four views to the participants and measure the degree of agreement or disagreement of their implementation in their university. The third area of investigation targets six items of the financial issues related to the management of funding resources. The Customer section entails seven items that focus on the students' satisfaction with the quality of education and administrative services within the university. The fifth part assesses 26 questions linked to the human, information, and organizational capital as metrics of the Learning and Growth perspective. The closing section involves eight items within the internal process perspective.

8.2 Research Population:

Concerning the population targeted by the cross-sectional study design, it consists of a representative sample of the overall population of the study universities appertaining to the top management as well as subordinate categories. This designation of the sample is carried out through taking a cross-section to represent the predetermined population. This representative sample (cross-section) serves to deduce generalizations of the findings for the population (Levin, 2006). Creswell (2003) highlights the significance of generalizing from a sample to a population to enable inferences on certain attitudes, characteristics, or behaviour related to that population. The cross-sectional study generalizability is deemed sufficient since it is the outcome of a systematic data collection and the representativeness of a particular demographic.

8.3 Sampling Method:

The researcher has settled on a simple probability sampling technique, namely, the stratified random-sampling method for the selection of participants. The implementation of this sampling has been in line with the nature and objectives of the current cross-sectional survey that seeks to assess the associations and disparities between groups/subgroups (Dillman, 2012). The stratified random sampling has been deemed the most congruent technique with this study owing to the nature of the population that consists of a broad-spectrum of university top executives, middle managers, various ranking employees, and different hierarchies of administrators and subordinates. On that account, random stratification becomes imperative if data from groups and sub-groups are required. Correspondingly, stratification makes it possible to observe and analyze relationships between subgroups and achieve a higher statistical precision due to the small size of the samples. Besides, it allows the investigator to survey within a reasonable time slot and affordable cost.

Probability sampling helps to predict the possibility of designating all the individuals of the target population and entices them to engage in the survey to ensure adequate representativeness of the sample. Indeed, randomness connotes providing equal chances of selecting each member of the target population. This population could comprise groups of people, events, or objects of interest sought for investigation by the researcher (Sekaran, 2003). Besides, random selection guarantees a precise calculation of the response rate (the rate of the responders who fill out and return the survey) as well as the easy detection of the non-responders. What is more, randomization ensures that a non-representative sample would not be chosen for the survey. Thus, it helps the investigator to avoid selection bias that comes from unequal representativeness (under or over representativeness) of each unit in the sample (Groves et al., 2004). Cooper & Schinder (2006) bring to focus three benefits of stratified random sampling. These are the statistical potency of the samples; the feasibility of multiple methods to diverse strata; and the efficient data analysis of strata. More importantly, randomness has a straightforward impact on the generalizability of the findings. This denotes that the prospect of generalizing the outcomes to the population is primarily contingent upon the extent to which the sample is reflexive of the entire population. This has been reiterated by Bowling (2009), who maintains that the random sampling method guarantees an adequate representative sample of the whole population. This way, individuals possess proportionate contingencies of being recruited.

In the context of this survey, the respondents have been randomly designated from the entire inventory of the potential participants perceived as convenient and eligible for the survey who belong to three Moroccan public universities, namely Moulay Ben Andlah University (Fes), Moulay Ismail University (Meknes), and University of Mohamed V (Rabat). Stratified random sampling was carried through to attain a sample size of 807 respondents from a population of 2585 top executives, mid managers, subordinates, and employees. Stratification has been implemented by the systematic division of the population into homogeneous strata (subgroups) based on some predetermined criteria of the respondents' assortment. This technique has enabled the researcher to scale down the sample size by dividing the population into small groups on the grounds of some shared attributes. Accordingly, each stratum has been formed based on at least one common feature, such as age, gender (male/female), managerial position administrative hierarchy structure (leader/non-leader), educational level, or professional qualification.

This distribution makes the sample more manageable for the sake of achieving more precision and reducing sampling error (the degree of disparity of a sample from the population). Such sampling tolerates the representativeness of the tiniest and most inaccessible subgroups in the population. Subsequently, simple random sampling is utilized to specify the number of individuals in each stratum. The current study targets different HEIs with various administrative structures and varied services that affect the sample size of these organizations. Thus, the stratified random sampling enables adequate representativeness of all the institutions.

8.4 Pilot Study:

Conducting pilot studies has enabled the researcher to initiate preliminary testing trials to assess many procedural, statistical, and content-related issues. Concerning the procedural aspects of data collection, this phase explores the intricacies that may emerge during the processes of the survey distribution and retrieval. Regarding the statistical concerns, the pilot survey provides the investigator with the necessary acquaintance with the software (SmartPLS 3) used for data coding, entry, and analysis while dealing with a limited number of questionnaires. The issue of the content has been highlighted by Yin (1994), who maintains that pilot studies help in refining the data collection methods as well as probing into the contents of the surveys. In this study, four structured questionnaires have been handed out to participants from publicly funded Moroccan universities. Meanwhile, the pretesting stage has been confined to three pilot studies. These tests sought to assess the French versions of the organizational

(OCAI); the Total Quality Management (TQM); and the organization measure the Balanced Scorecard (BSC) surveys. Regarding the leadership style measure MLQ 5x-short (Leader and Rater forms), it has been adopted from their developers Avolio & Bass (2004). Therefore, the piloting phase has been discarded for this instrument. This measure has abundantly been vindicated and ratified by a vast body of literature and research. This is thoroughly accounted for in the upcoming psychometric validation of the research instruments. The three questionnaires have originally been developed in English. This has required a meticulous translation of these surveys into French. Therefore, a systematic process of translating the OCAI, BSC, and TQM has been carried out with the contribution and assistance of two PhD students and a French high school teacher. The final French versions have been overviewed by another French teacher for additional precision and accuracy. Prior to the initiation of the pilot tests, the researcher has set several criteria to identify deficient questionnaires. These features have been derived from Kahn & Cannell (1957), who determine five standards of defective and invalid surveys. These are the partial response, verbalized responses, inaccurate responses, non-responses, and inappropriate responses.

8.5 Population and Sampling Frame of the Pilot Studies:

The three survey questionnaires have been self-administered to a randomly-selected sample size of 40 participants. The informants appertain to a broad-spectrum of management positions and administrative services of the state universities. A detailed inventory of the surveyed services and departments specifies the wide-ranging categories and hierarchies of the raters as follows:

Services attached to the Dean:

- ✓ Secretariat and order office
- ✓ Cell of Distance Education & Pedagogical Innovations.
- ✓ Communication unit.
- ✓ Audit & Quality Manager.
- ✓ Curator of the library.
- ✓ Other.....

Services attached to the Secretary-General:

1. *School Service:*

- ✓ Office of LF right
- ✓ Office of LF Eco & Management
- ✓ Office of masters and LP
- ✓ Scholarship Office
- ✓ Office of Records Management
- ✓ Other.....

2. *Information System Service:*

- ✓ SI Administration Education and Pedagogy
- ✓ Web Administration
- ✓ Office of Statistics & Planning
- ✓ Office of maintenance and user support.
- ✓ Office of Development and Project Management.
- ✓ Other.....

3. *Human Resources Service:*

- ✓ Office of Administrative Management
- ✓ HR Development Office.
- ✓ Other.....

4. *Logistics Service and Service Management:*

✓ Management Office

✓ Other.....

5. *Department of Financial Management and Patrimony:*

✓ Purchasing Office

✓ Payments Office

✓ Office of Accounting & Budget.

✓ Other.....

Services attached to the Vice Dean in charge of Continuing Education & Projects Office:

✓ Financial Affairs Office.

✓ Reception and schooling office

✓ On the other.....

Services attached to the Vice Dean in charge of Scientific Research and Cooperation:

✓ Office of Administrative Affairs of R.S. and C.

✓ Other.....

Services attached to the Vice Dean in charge of Academic Affairs and Student Life:

✓ Office of Academic Affairs

✓ Service of Prog. & Exams

✓ Office of Student Life

✓ Other.....

Services attached to the Director of Center for Doctoral Studies:

✓ Scientific and Academic missions of CDS.

✓ CDS Administrative Office.

Subsequent to the identification of the sample frame, the distribution strategy consists of handing out the forty questionnaires along with feedback notepapers to the respondents as displayed in the following table:

Table 10: Population and Sampling Frame of the questionnaires Pilot Studies (N= 40)

Measures	Informants	Respondents Category	Gender/Age	Response Rate	Valid Questionnaire
OCAI	10	Subordinates	3 females Btw 27-50 7 males Btw 30-35	100 %	9 valid questionnaires
TQM	15	Leaders & Subordinates	6 females Btw 29-40 9 males Btw 30-55	100 %	15 valid questionnaires
BSC	14	Leaders & Subordinates	7 females Btw 29-45 7 males Btw 28-50	100 %	12 valid questionnaires
OCAI+ TQM+ BSC	1	Statistician	1 male - 29	-	-

8.5.1 Pilot Test I:

The OCAI copies have been handed out to ten informants appertaining to the category of subordinates who work in different services attached to the deans, the secretary generals, the vice deans, the directors of centres for doctoral studies, and the heads of departments. The objective has been to elicit the respondents' feedback concerning the clarity and relevance of the OCAI questions and sections. All the surveys have been filled out and returned in 10 days. The response rate reaches 100 per cent, yet one questionnaire has been discarded due to the partial response reason. This has been decided in line with Sekran & Bougie's (2013) suggestion to remove the questionnaire that fails to respond to more than 25 per cent of its content. The aggregate data from this sample have confirmed the comprehensibility of the structure and language of the formulated

questions, the relevance of the items to their sections, and the lack of any overlap between different sections. Meanwhile, three respondents of the ambiguous significance and connotation of the word ‘stakeholder’ concerning the university context have raised one remark. Therefore, a clarification of this concept has been annexed to the preface of the final version of the OCAI questionnaire.

8.5.2 Pilot Test II:

In this pilot study, fifteen TQM questionnaires have been administered to the two-sample categories targeted in this research. Therefore, eight copies have been given away to subordinates (belonging to the previously detailed services), whereas the remaining seven questionnaires have been handed over to the universities’ top executives. These leaders are faculty deans, vice-deans, and secretary-generals.

The objective has been to survey the participants of both categories concerning the pertinence of the areas of concern related to quality management applications listed throughout the TQM questionnaire. Besides, the respondents have been requested to examine the clarity and relevance of the questions catalogued in three sections. All the surveys have been recovered in one week. The response rate has been 100 per cent, and all the retrieved copies have been deemed valid and adequate for data analysis.

The outcomes from this sample have demonstrated a clear distinction between the three sections (financial autonomy, academic autonomy, and governance autonomy). This has been shown in the raters’ comments on the diversity and clarity of the questions and divisions of the themes. In the meantime, two respondents have raised the issue of the content of the second section (financial autonomy/applications). They have stated that they are not in the position of providing confident and accurate replies due to the lack of information. Both participants have made it clear that their job specializations do not allow them to have access to such financial details. Meanwhile, both have maintained that their answers have been derived from their general knowledge and the impressions they have rather than from well-informed sources. Accordingly, to avoid such inconvenience, the investigator has decided to address the final TQM survey to a more representative sample, chiefly to the employees working in the financial and accounting services to avoid any information bias.

8.5.3 Pilot Test III:

The subordinates and leaders of two public universities (from the same sample frame that has already been discussed) have filled out fourteen BSC questionnaires. The objective has been to put to the test the comprehensibility and easiness of the questions and their divisions among five sections.

All the questions have been retrieved in twelve days, thus achieving 100 per cent response rate. However, two copies have been discarded from data analysis due to the partial response and non-response reasons. Data analysis has proved the clarity and simplicity of the questions and their compatibility with their assigned sections. Meanwhile, two respondents have commented on the lengthiness of the fourth section (learning and growth perspective). They have stated that this section is a bit lengthy and that it requires some abridgement. While taking seriously into account this remark, the researcher has deemed all the questions listed in this section to be fundamental to answer the research questions and account for the hypotheses related to the TQM part of this study.

8.5.4 Pilot Test IV:

The last pilot study has mainly been an expert's examination of the whole survey package to provide evaluative comments related to the statistical practicality and plausibility of the questionnaires. Therefore, the surveys have been inspected by an expert statistician to account for many technical aspects related to the content questions, data coding, data entry, and data analysis procedures. The test has proved that all the questionnaires have been adequately designed to meet the statistical requirements of the Smart-PLS software. What is more, it has been confirmed that no serious errors or problems would affect data processing and analysis. The few ones that have been detected have immediately been dealt with. Subsequently, the statistician has been requested to review the code database and has found no omissions or errors.

8.5.5 Pilot Tests Data Analysis:

The data from the four pilot tests were processed utilizing SmartPLS software. On that account, three procedures have been carried out before data analysis and results. These are data editing/cleaning, data coding, and data entry. Thus, after editing data to make sure that the accumulated information is free from deletions and errors, the researcher embarked on creating a database codebook for the upcoming phase of data analysis (see Appendices L, M, N, and O).

Then, the manual entry of data has been undertaken. For additional screening and checking of the keyed data, another Ph.D student double-checked them. Therefore, data have been deemed adequate for the final stage analysis.

9 Initiation to the Research Instruments Psychometrics:

A broad description of psychometrics brings forth the theoretical and applied approaches concerned with psychological measurement. In the meantime, a detailed account of this subject area brings to focus two facets of significant importance. The first one corresponds with the elaboration and validation of measurement instruments, in particular, survey questionnaires, raters' appraisals, and tests. Whereas, the second aspect is mainly associated with descriptive statistics of the instrumental data. Psychometricians are engaged in the first implementation as they work towards the construction of plausible and credible instruments following stringent psychometric norms. These standards are referred to as validity and reliability. The alternative usage of psychometrics assists researchers to conduct statistical analyses to describe the collected data. The analytical data most often take the form of variables (e.g., independent, dependent, mediators, and moderators). The interrelations between these factors are depicted using inferential statistics. This dissertation deploys both applications of psychometrics as it seeks to substantiate the four used research instruments together with the dissection of the descriptive statistics of the collected data. This is in line with Kimberlin & Winterstein (2008), who attest that validity and reliability are indispensable to provide evidence of the quality and integrity of a measuring tool. Similarly, Graziano & Raulin (2006) underscore the imperative deployment of validity and reliability to ensure the attainment of meaningful and significant information. The significance of these indicators has long been emphasized. Accordingly, Cronbach & Meehl (1955) have been the first scholars who have introduced validity as a fundamental criterion for the appraisal of psychological measures in the mid-20th century. In fact, Altheide & Johnson (1994), who maintain that reliability, is essential to uphold the stability of the findings, while validity verifies the truthfulness of the outcomes, have further advocated the recognition of validity and reliability as imperative barometers to affirm the adequacy of measures. What is more striking about these metrics is that an instrument must prove its reliability to be valid, whereas it could be reliable without necessarily being valid (Kimberlin & Winterstein, 2008). In this sense, reliability is deemed a subcomponent of validity, and therefore, validity cannot be achieved without ensuring

the reliabilities of the framework (Willis, 2007). This section ponders upon the significance of validity and reliability and digs into them to unveil the most compatible sub measures with *the* Multifactor Leadership Questionnaire (MLQ), Organizational Culture Assessment Instrument (OCAI), Total Quality Management Questionnaire (TQM), and Balanced Scorecard Questionnaire (BSC).

9.1 The Psychometric Properties of the Quantitative questionnaires:

9.1.1 Measure I): The Multifactor Leadership Questionnaire (MLQ):

A sketch of the leadership literature would readily establish the multifactor leadership questionnaire as the most eminent survey instrument among academics and researchers. This worldwide recognition is seemingly attributed to the strong validity and reliability of this measure. Therefore, Ozaralli (2003) holds in high regard the plausibility of the MLQ and considers it the best-validated instrument for the measurement of the transformational and transactional leadership. In the same vein, Kirbride (2006) corroborates the validity of the MLQ as an adequate instrument to quantify transformational and transactional factors. However, substantial studies take nothing for granted concerning the structure and consistency of this instrument. Although there has been a broad acceptance and support of the MLQ as the most valid and accessible measurement apparatus (Antonakis et al., 2003), other researchers provide counterarguments concerning the posited high correlations between its factors. For instance, Hater & Bass (1988) contend that only six factors are valid components of the MLQ. Besides, Bycio et al., (1995) state that only five elements display high validity. On the same subject of interrelations, the persistent concerns that have been raised revolve around the potential multi-collinearity of the transformational scales. Otherwise stated, the notable inter-correlation between factors denotes a possible deficiency in measuring all constructs (Bycio et al., 1995). In a similar vein, it has been hypothesized that many issues affect the credibility of the MLQ. The most outspoken criticisms centre on the lack of discriminant validity relating to particular factors of leadership, the switch of wordings, and the fusion of attributions and behaviours in one scale. All these problems probably result in the elevated convergence among the MLQ subscales. Lowe et al., (1996), who maintain that the major hindrance to the widespread approval of the theory of multifactor leadership lies in the severe psychometric issues associated with the MLQ, have summed up these consequential concerns. In the meantime, Avolio et al., (1995) have not fallen in line with these negative analyses

as they provide counterstatements against the lack of validity of the MLQ. They deny the adequacy of most of these studies and contend that they target only limited samples that are insufficient to generalize out of them. What is more, Bass & Avolio (1997) criticize the researches that fall short of confirming the factor structure of the MLQ. They attribute these failures to many reasons mainly, the small or restricted sample sizes, unique sample features, inadequate item construction, and the omission of all scales from the original model. Additionally, Bass & Avolio (1995) argue that since the development of the MLQ items, they have been elaborated with the aim of decreasing the number of the elements that require estimation, discarding cross-loading of factors, and fostering the psychometrics of this instrument. These criteria have been set with the intent to gain worldwide consent to this measurement instrument. To that end, the most updated version, the MLQ 5X, has undergone a series of refinements that reshaped its development since its first initiation in 1985. In this context, Yammarino et al., (1998) recognize that many modifications of the MLQ have been necessary to generate scales with adequate psychometric properties. Meanwhile, Avolio et al., (1999) hold that adjustments help to quantify the multidimensional aspects of traditional leadership just in a few settings.

In point of fact, the newest revisions of the MLQ 5X (short form) have been the outcome of a long process of inspection and testing. Accordingly, Avolio et al., (1995) determine three sources of the MLQ latest version remodelling. The first process has been the accumulation of the outcomes from confirmatory and exploratory analyses. The second source of development has been the findings from preceding investigations of the earlier versions of the MLQ. The third source has been the assessment of six prominent leadership experts who provide value judgments and tips concerning the inclusion and removal of various components of the MLQ. Above all, as previously discussed, what instigates the revisions of the MLQ has chiefly been the severe criticisms regarding its factor structure. These touch upon the conceptual as well as the empirical shortcomings that have been brought forth by many experts.

9.1.1.1 Validity of MLQ:

Building on the critical matters related to the MLQ structure, many scholars have embarked on inspecting and testing this measure using various forms of validity. Therefore, some studies have focused on probing the construct validity of the paradigm; others have resorted to criterion, convergent, or discriminant validity to assess its fundamental properties. This is in line with

Cronbach & Meehl's (1955) identification of construct validity as being the unique admissible pattern of validity in social science. They further suggest five approaches to break down construct validity. These range from the analysis of group disparities right through the inspection of correlation models along with factorial structures and examination of processes, to the scrutiny of change over occasions. Correspondingly, two methods have dominated the psychometric studies of the MLQ validity throughout the literature: Confirmatory Factor Analysis (CFA) and Exploratory Factor Analysis. Factor analysis is a statistical mechanism that has widely been chosen to explore variable relationships modelled in intricate psychological or socioeconomic scales. It serves to depict viability between interrelated variables about the factor refinger to the decreased number of unobserved constructs. Factor analysis tests have extensively been carried out to authenticate the validity of the MLQ model. It is worth mentioning that the significance of the CFA is embodied in the assessment of the factor structure of a given measurement instrument, as well as the examination of the extent to which it fits data or not (Bollen, 1989).

In this respect, countless studies have undertaken confirmatory factor analyses to report on the quality of the MLQ. To start with, Avolio et al., (1995) certify that the MLQ 5X has been processed through confirmatory factor analysis. It has been executed by nine investigators and involved 1,394 participants. The researchers contend that many factor models of the MLQ, including a two-factor paradigm, a three-factor paradigm, and a nine-factor paradigm, have been scrutinized. They conclude that a noticeable improvement in the fit indices applied in the structural equation has been achieved all through the progress from one pattern to another. Furthermore, Tepper & Percy (1994) have applied confirmatory analysis to weigh the item and scale characteristics of the MLQ structure. To this end, they have used two separate samples. The outcomes of the first pattern fail to establish an adequate match between the studied model and the data. In the subsequent sample, the researchers have centred upon the convergent and discriminant forms of validity. The findings linked to idealized influence, inspirational motivation, and contingent reward have been identical with the initial sample. They reach the conclusion that the first scales should be considered as barometers of a specific dimension. In a similar vein, Howell & Avolio (1993) implement a confirmatory approach on the MLQ (Form 10, the version of 1990) to substantiate factors like the contingent reward, charisma, management-by-exception (active and passive), intellectual stimulation, and individualized consideration. What is more, Lienert & Raatz (1998) holds that the factorial structure delineates the factorial validity of a measurement

instrument, and therefore, constitutes an integral part of the construct validity. Geyer & Steyrer (1998) delve into the MLQ 5R and validate the transformational scale along with three transactional scales. Tracey & Hinkin (1998) find out a high correlation between the subscales of transformational leadership. Similarly, Kelloway et al., (2000) perceive the transformational leadership scale as having considerable correlations among its subitems. Lee et al., (2011) confirm the construct validity by reporting factor loadings values related to the confirmatory factor analysis with averages from .62 to .91. Factor loading is the expression of the correlation between individual variables and the underlying factors. Koh et al., (1995) authenticate a five-factor structure entailing laissez-faire scale, management-by-exception (passive), charisma, management-by-exception (active), and contingent reward. Other studies have utilized criterion validity and discriminant validity tests to account for the MLQ. For instance, Bass & Avolio (1997) use convergent and discriminant validity forms to conclude that the partial least square analysis provides further validation to the measurement instrument. Meanwhile, Tepper & Percy (1994) have studied the MLQ Form x (the version of 1990) discriminant validity following confirmatory factor analysis and draw the conclusion that two scales measure the identical latent construct, while contingent reward, individualized consideration, and intellectual stimulation constitute variant constructs. Avolio et al., (1995) corroborate the significantly high correlation among the transformational factors with an average of 0.83. They also provide an illustration regarding the internal scales and contingent reward 0.71. They maintain that both scales (transformational and contingent reward) make up active and positive types of leadership. They attest that the nine-factor model meets the requirements recommended by different scholars. Aside from the assessments appertaining to the confirmatory factor analysis, some researchers have put the MLQ to the test using exploratory factor analysis (EFA). They come up with supportive outcomes for the model. For example, Druskat (1994) gives a five-factor model account of the MLQ deploying the score exploratory factor analysis to validate the paradigm. Hinkin et al., (1997) put an exploratory factor analysis into effect to check that the MLQ 5X encloses individualized consideration, intellectual stimulation, and inspirational motivation. Den Hartog et al., (1997) have had recourse to exploratory factor analysis to measure the validity of the MLQ 8Y (the version of 1989). The findings support the three-factor pattern comprising transformational, transactional, and laissez-faire scales.

9.1.1.2 Reliability of MLQ:

Concerning the reliability of the MLQ, this model has been established as a highly reliable instrument of assessment. It has been gaining the reputation of a scientifically trusted measure all through its development. This reliability has been boosted further by the large-scale translation and usage across the globe. In this regard, Avolio & Bass (2004) bring forward the MLQ as a reliable full-range leadership tool of measurement. This instrument is at the heart of the theory and practice of the Full Range Leadership. Also, Felfe & Schyns (2004) compute the reliability of the model using Cronbach Alpha and acknowledge its solid psychometric construction. It is noteworthy to mention that Cronbach's Alpha is deemed a suitable reliability coefficient that almost all researchers make use of in their studies (Cronbach, 1951). This metric calculates the correlation between the individual item variance and the aggregate scale variance. It quantifies the relationship between the score of the test and the variables' presumed actual value. Besides, Heinitz et al., (2005) give evidence of the internal consistency alternate factor structures as well as the inter-item interrelationships of the MLQ. Meanwhile, Bass & Avolio (2004) resort to the confirmatory factor analysis to prove that the MLQ is a reliable instrument. They demonstrate that it has a high factor loadings and internal consistency. This study has claimed the substantial reliabilities of the MLQ. Gellis (2001) confirms the reliability and inter-item correlations of the subitems of the MLQ. What is more, Babbic & Mouton (2001) associate reliability with the dependability of the measurement. In other words, a reliability quantification yields similar results repeatedly. This denotes the consistency and stability of the score outcomes over time and participants. Bass & Avolio (1995) ascertain that the reliabilities of the MLQ 5X account for each leadership factors all through the nine elaborated scales of this instrument. Kanste et al., (2007) assert that the MLQ is a reliable measure concerning internal consistency and stability. Moreover, Bass (1998) states that "the consistent honoring of transactional arguments builds trust, dependability, and perception of consistency with leaders by followers, which are each a basis for transformational leadership" (p. 11). Bass's confirmation of the transactional and transformational scales stems from the consistency and dependability criteria of the model as a whole.

This critical review and reexamination of the psychometric properties of the MLQ bring it into prominence as a worldwide valid and reliable measurement instrument. Though it has been open to criticism regarding its presumed structural vulnerabilities, the global fame and massive implementation disclose the overwhelming plausibility and credibility it has gained among the

scientific community. The current study follows suit to quantify the impact of leadership style on the universities' performance in the Moroccan setting using the MLQ 5X questionnaire.

9.1.2 Measure II): The Organizational Culture Assessment Instrument (OCAI):

The widely recognized efficiency of the CVF model comes from its well-founded survey instrument, the Organizational Competing Assessment Instrument (OCAI). This diagnostic tool is a scientifically tested questionnaire based on the CVF model. Since its validation by Cameron & Quinn (1999), it has extensively been utilized to carry out quantitative research on a varied range of variables pertinent to organizational settings. It has quickly been rated among the 50 most validated frameworks in the business field (Igo & Skitmore, 2006). The Organizational Competing Frameworks Instrument seeks to assess six key dimensions: Dominant characteristics, organizational leadership, management employees, organizational glue, strategic emphasis, and criteria of success. Although these dimensions are not all-inclusive, they do account for the most integral features that are predictive of an organization's culture (Cameron & Quinn, 2011).

The utility of the OCAI is embodied in its ability to describe and explore the prevailing culture, the strong points of the dominant culture, the congruence between the individuals and groups, and culture types within organizations. What is more, it serves to analyze an organization's culture following the profiles of the average culture and compare the data with some vast research outcomes in the past 20 years (Cameron & Quinn, 2011).

9.1.3 Validity and reliability of the Organizational Culture Assessment Instrument:

This is one of the most ratified psychometric survey tools that have been validated across a vast body of literature and many distinct types of research (Quinn & Speitzer, 1991). These researchers put the OCAI under scrutiny to account for its reliability. The outcomes of the study confirm the consistency of this instrument statistically in the rating of 800 organizations throughout 86 different public utilities. Yeung et al., (1991) survey over ten thousand executives in more than 1000 businesses and reiterated the statistical reliability of this premise. Cameron & Freeman (1991) consolidate the validity of the OCAI by studying and analyzing more than 300 higher education institutions. Similarly, Zammuto & Krakower (1991) investigate universities and reach the same high-reliability statistics of the OCAI. Kalliath et al., (1999) substantiate the validity and reliability of the OCAI by using structural equating modelling to assess the factor

structure of the OCAI. Finally, Colyer (2000) gives a moderate to a high account of the internal consistencies of the OCAI. These studies have established the Organizational Competing Assessment Instrument (OCAI) as one of the most robust and statistically reliable tools for surveying organizations.

9.1.4 Measure III): The Balanced Scorecard (BSC) Psychometrics:

The Balanced Scorecard paradigm, as developed by Kaplan and Norton (1992), has been confirmed as having high validity and reliability. Thus, the four underlying dimensions originally elaborated with this framework have been put under scrutiny to provide evidence of their psychometric plausibility. In this respect, Emilio (2006) conducts an empirical examination of the reliability of the BSC measures along with the validity of the BSC dimensions. The study delves into the four underlying components of this model to account for the performance of business units. The research starts with the remarkable scarcity of empirical accounts that support Financial, Customer, Internal Processes, and Learning and Growth perspectives. The investigation of ninety business units in Canada has been through three phases:

1. The determination of the standard measures pertinent to the basic dimensions of the BSC
2. The testing of the reliability of the measures
3. The investigation of the factorial validity of the BSC

Factorial validity looks into how coherent the theoretical expectations are with the empirical outcomes. Concerning the assessment of the internal consistency reliability, the researcher has opted for Cronbach's Alpha coefficient to confirm the framework. The results have supported the reliability of the BSC dimensions with 0.64 for financial measures; 0.51 for the Customer dimension; 0.55 for the internal business processes; and 0.43 for the learning and growth. The researcher has deleted some items to enhance these averages and approximates Nunnally's (1967) reasonable coefficient of 0.60. With regards to validity, the study applies a factor analysis test, and the factor loadings reinforce and validate the BSC (e.g., 0.268 as loading for the Financial dimension and 0.275 loadings for the Learning & Growth). The overall outcomes from the reliability and factor analysis demonstrate robust internal consistency reliability and validity of the BSC, as introduced by Kaplan and Norton originally. Meanwhile, this paradigm's psychometrics have been subject to some criticism. For instance, Lipe & Salterio (2002) state that the credibility

and significance of the BSC are affected by the hindrances of validity and reliability measures. In a similar vein, Lingle & Schiemann (1996) hold that consecutive reports have shown a great deal of concern, particularly on the part of managers concerning the reliability of the non-financial metrics of the BSC. This thesis follows suit of the dominant trend in the research. It conducts composite reliability to confirm the reliability and validity of the proposed BSC questionnaire based on the four original dimensions initiated by Kaplan and Norton (1992).

9.1.5 Measure IV): The Total Quality Management (TQM) Psychometrics:

For the assessment of the hypothesized conceptual framework (p.104) related to a total quality management application in Moroccan higher education, the researcher has brought forth the TQM survey questionnaire. The author has designed the TQM measurement instrument through the synthesis of the most prevalent TQM practices in the literature and the recommendations of the National Charter of Education (1999) and Statute 01-00 (2000). Therefore, Financial, Academic, and Governance applications have been tailored to fit the survey objectives. Quality management dimensions differ from research to another, depending on the goals and scope of each work. Accordingly, tremendous investigations have been carried out in the field of quality management to uncover the predominant practices underlying this subject area. This has brought about various types of TQM questionnaires assessing different factors. In this respect, the TQM-performance association has been surveyed following multiple performance indicators such as financial focus, academic perspective, administrative (governance), operation and quality performance, etc. Indeed, a broad range of principles has been used to search for the effect of TQM on performance. In the meantime, most of the studies have deployed roughly the same assessment technique for the reliability of their questionnaires. There has been an apparent consensus on Cronbach's alpha as an efficient reliability test for the internal consistency of most scales. By way of illustration, Shekoufeh & Siavash (2013) apply alpha coefficients as an index to weigh the reliability of the proposed questionnaire. They have also made use of the structural equation (path analyses) to unveil the structural model. The outcomes have proved that the four adopted dimensions demonstrate high reliability. For instance, TQM factor scores 0.85; quality performance achieves 0.85; innovation performance gets the average of 0.72; and the fourth-factor organizational performance rates of 0.84. All these factors exceed 0.70 and get closer to 1 the perfect score for complete reliability. Abd El-Moneim A. El-Tohamy (2015) calculates the TQM

indicators and finds out a high-reliability rate of the different principles with a total Cronbach's alpha of 0.85. All the factors achieve more than 0.80, which shows the strong internal consistency of this framework. In this regard, customer focus organizations perspective rates 0.86; education and training 0.89; and teamwork gets 0.88. These are very satisfactory scores as far as reliability indexation is concerned. Furthermore, Zhang (2001) uses Cronbach's alpha to test multiple TQM scales. The results have been mostly above the required 0.70. For example, customer focus scores 0.87; education and training 0.88; process control and improvement achieves 0.88; and leadership rates 0.89. Similarly, Conca et al., (2004) produce satisfactory alpha averages with 0.77 for the leadership measure. Whereas, customer focus performance scores an acceptable alpha of 0.54. All these studies lend credence to the Cronbach alpha coefficient as the most applicable test to give support to these questionnaires. Likewise, this study's survey questionnaire has been processed using this internal consistency measure to substantiate the composite reliability of the 29 items.

10 Qualitative Data Collection:

10.1 Semi-Structure Survey Interviews

Integral to the comprehensive two-stage cross-sectional survey, the outcomes from the quantitative research have been harnessed to formulate the qualitative questions underlying the second phase of this survey. This sequential approach allows the second process entailing the qualitative data collection to draw on the insights of the questionnaires for a far-reaching mixed-method account of the research areas. Therefore, self-administrative semi-structured interviews have been held to collect qualitative information through the organization of several rounds of face-to-face encounters with the participants. Opting for this type of interview has been in harmony with the analytical nature of this study. This entails a thematic arrangement of the questions to ensure a resilient transition through the various sections and a systematic analysis of the themes. The elaboration of the interview questions has been in line with the research questions. On that account, open-ended questions involving flexible addition and change of items have been deployed to fit the expanding and emerging themes. The questions have been formed with the aspiration to aggregate valuable and detailed views from a wide array of executives, administrators, professionals, stakeholders, and experts in tertiary education. The questions target to elicit detailed answers and knowledge related to the different leadership styles (transformational, transactional and laissez-faire). They deal with the various types of organizational culture (clan, hierarchy,

adhocracy and market cultures). They also address the diverse strategies and policies of quality management (financial, academic and governance autonomies), and the major perspectives linked to organizational performance (Customer perspective, financial perspective, internal processes, learning and growth perspective). Further leadership and work-related issues have sprung up all through the interview as the respondents have been given sufficient freedom to express themselves. Meanwhile, general adherence to the preplanned thematic arrangement has been followed. The investigator has followed a four-step procedure in the elaboration, holding, and analysis of the interviews:

- ✓ Preparing and formulating open-ended questions based on the insights and outcomes of the quantitative questionnaires.
- ✓ Refining and drafting the interview through a pilot test. This stage has sought to confirm and determine the extent to which the questions are clear and relevant to the different proposed themes.
- ✓ Selecting and recruiting the subsample from the respondents of the questionnaires based on their prior agreement to participate in the interview.
- ✓ Editing/cleaning, coding and entry of data.
- ✓ Analyzing the qualitative data through the thematic dissection and interpretation of the themes.

The interviews have been carried out all along the period extending from January to May 2019. No form of incentive has been granted to the participant as all of them have already shown their enthusiasm to partake in the survey.

10.2 Sampling Method:

The selection of the sample representing the interviewees has been through the filtering of the respondents of the questionnaires. They have deliberately manifested their consent to take part in the interview phase. This has been ensured through their positive reply to the question of whether they want to be interviewed or not. Thus, the sample has been identified through the purposive sampling from managerial/leadership executives, middle managers, subordinates and employees from different administrative hierarchies. The objective is to form an even subsample that has a high representativity of the target population. Supplementary demographic information involving age, gender, and educational level has provided further homogeneity to the subsample.

Subsequent to the identification of the sample group, cross-section randomization of the study group has been initiated to single out the most representative individuals based on inclusion and exclusion criteria.

In this respect, for the recruitment of the participants, an exhaustive inventory has been established and later on randomized to obtain the subset sample. The list has been intended to include 15 faculty of human sciences, 15 faculty of science, 16 faculty of law, 15 superior school, and 15 presidency offices. These higher educational institutions belong to three Moroccan public universities, namely Moulay Ben Andlah University (Fes), Moulay Ismail University (Meknes), and University of Mohamed V (Rabat). All along the selection process, predetermined inclusive and exclusive criteria have been set in order to screen and take a stand vis-à-vis the eligibility of the different participants to partake in the interview. The eligibility requirements have been formed with the intent to designate the most suitable profiles for this study. The goal is to elicit straightforward and productive insights on the themes related to leadership style, organizational culture, total quality management, balanced scorecard, and organizational performance. Therefore, for participants to be included in the interview, their profiles should meet the following prerequisites:

- ✓ Participants belonging to the top management as well as to the subordinate/employee categories should have two years of professional experience.
- ✓ Participants belonging to both categories should have a higher degree.

Concerning the exclusion criteria, they have been summed up in the participant's lack of sufficient experience and professional maturity, as well as the inability to provide accurate and nurturing answers due to authority issues.

Table 11: Population and Sampling Frame of the Pilot Interviews (N= 22)

Interviews	Interviewees	Respondents Category	Gender/Age	Position/Title	Number of years
Organizational Culture	4	Top Management	4 males Btw 44-59	-Participant 1 –Secretary General -Participant 2 –University President -Participant 3 – Vice-President (Scientific Research & Innovation) -Participant 4 – Vice-President (Academic Affairs & University Development)	Btw 2-7
Leadership Style	6	Subordinates/Employees	2 females Btw 30-55 4 males Btw 29-60	-Participant 5– HR Development Office subordinate - Participant 6– Audit & Quality Manager - Participant 7– Development and Project Manager - Participant 8– Curator of the library. - Participant 9– Statistics & Planning agent - Participant 10– maintenance and user support manager.	Btw 2-14
Total Quality Management	6	Top Management	1 female 49 5 males Btw 38-60	-Participant 11 –University President -Participant 12 –Secretary General -Participant 13 –Vice-president in charge of Cooperation and International Relations - Participant 14 –Vice-President in charge of Academic Affairs & University Development. - Participant 15–Faculty Dean (FLSH) - Participant 16–Faculty Dean (EST)	Btw 2-5
Balanced Scorecard	6	Top Management	2 females Btw 30-55 4 males Btw 44-60	-Participant 17 – Director of the Doctoral Study Centre - Participant 18 – Faculty Dean(FSJES) - Participant 19 – Secretary General - Participant 20 –Faculty Dean (FLSH) - Participant 21 – University President - Participant 22 – Vice-President OF Scientific Research & Innovation	Btw 2-8

10.3 Semi-structured Interview Pilot Study:

Within the scope of the piloting phase, four semi-structured interviews were subject to a thorough examination of three participants. Therefore, the initial survey entailed 40 open-ended questions. Meanwhile, the examiners' feedback has led to the omission of nine questions, mainly due to overlapping and reoccurrence reasons. On that account, deletions took place in two interviews as follows:

Semi-structured Interview -1	Deleted questions
Organizational Culture	<u>Introduction:</u> 1. What are the underlying values that your organization is keen on establishing and fostering? <u>Adhocracy Pattern:</u> 4. Are the members of your organization counselled and involved in the decision-making process related to innovation schemes and projects? 5. What incentives are they (members) offered to stimulate them to contribute effectively in creative and innovative projects? <u>Hierarchy Patter:</u> 5. How important are the procedures and bureaucracies in your organization?

The question that concerns the underlying values of the organization has been deemed to intersect with the following question: how can you describe the organizational culture in your organization?

The characterizations provided by the participants reflected the values prevailing within their organizations; therefore, it has been deleted to avoid any point of intersection. Likewise, the fourth and fifth questions regarding adhocracy culture were removed. It was held that there was an obvious overlap with the question: are the members of your organization engaged in innovation plans? If yes, how? With reference to the hierarchy pattern, it was deemed necessary to omit the fifth question as it fell within the scope of the fourth question: how flexible or inflexible is the administrative hierarchy in your organization? The examiners contended that the inflexible model was embodied in complex procedures and bureaucracies.

Semi-structured Interview -1	Deleted questions
Leadership Style	<u>Transactional Leadership:</u> 1. Are you rewarded for the accomplishment of goals and achievement of mission? If yes, what kind of reward? <u>Laissez-faire:</u> 2. How quick are leaders in your organization in reacting to urgent situations? 4. How do leaders in your organization react in moments of pressure or crisis?

As regards the first question that probes into transactional leadership, it was considered that it overlaps with the second question: what measures do leaders in your organization take against you and your colleagues in case you underperform, or do not adhere to standards? Therefore, it was maintained that the reward strategy was included in the second question.

On the subject of laissez-faire leadership, two questions were conceived to be a repetitive and required exclusion. Thus, items two and four were dropped from the final version of the interview. These refinements had been carried out after extensive discussion and argumentation with the three examiners.

10.4 Data Analysis Procedure:

For the qualitative data processing and analysis, the whole raft of discussions has been recorded using Samsung 7 Edge. The choice of this device has been due to the high quality of its voice recorder application. Data storage privacy has been made explicit to the participants. Subsequent to the data collection and recording, an extensive word-for-word (verbatim) transcription of the audios has been carried through. Furthermore, a notetaking technique has been utilized for the meticulous documentation of the information. This technique facilitates the researcher's task of analyzing data through the coding of the themes or sections. This enables thematic examination and analysis of the accumulated data. In the meantime, the newly emerging themes are treated likewise and are adhered to open coding to provide descriptions of the different sections. The manual coding of data has been undertaken on inductively drawn coding schemes. The coding ensures the analysis of the relationships and frequency between topics. The check and double-check of the content of the transcripts have been carried out to make sure that there is no information error or bias. The primary themes are brought to focus right after the coding of the qualitative data. Therefore, the thematic analysis has followed the themes arrangement and topic headings of the sections that have been put under scrutiny as follows (See the part of the thematic analysis on page..).

11 Operationalizing variables :

The current research paper has been evolving from the elaboration of the conceptual frameworks (abstract concepts) through the operationalization of the research variables (measurable factors) to the empirical measurement using quantitative and qualitative measures.

On that account, the conceptual frames of reference have been drawn from the most meaningful models and theories that fall within the scope and objective of this study. They bring together the most corresponding components to form hypothetical patterns based on abstract concepts. Building on that, the operationalization process draws its significance from the fact that abstract constructs cannot be measured unless they are converted into quantifiable variables (factors conversion). This is in line with Allen & Yen's (2002) depiction of the operationalization process as the activation and translation of the conceptual framework into statistically surveyable and analyzable variables. Accordingly, this research approach to operationalize all the variables revolves around the following procedures:

- The discernment of the different properties and sub-dimensions involved in the concepts.
- The conversion and translation of the constructs into assessable factors.
- The specification of the measurement instruments of all the variables.

I) Operational Organizational Culture :

This variable is operationalized with four dimensions: clan, adhocracy, market, and hierarchy cultures (see the table 12). The conceptual framework is built upon Cameron and Quinn's (2006) CVF model. Meanwhile, the empirical study that probes the positive and negative effects of these types of culture on the performance of the Moroccan universities has been conducted based on precise and measurable items. This construct is quantified using the OCAI research measure. Six categories are assessed in this five-point Likert scale survey questionnaire. Each of these six operationalized dimensions comprises four weighable alternatives.

II) Operational Leadership Style:

The proposed hypotheses reflect the different influences that the three primary styles, transformational, transactional, and Laissez-faire, exert on the performance of the Moroccan public universities. The scales consist of 45 items each, rated by leaders and subordinates according to a five-point Likert-type scale as follows: 0= not at all, 1= once in a while, 2= sometimes, 3= fairly often, and lastly 4= frequently, if not always.

III) Operational Total Quality Management:

For the assessment of the total quality management, three applications have been put into effect. These are financial, academic, and administrative autonomies. Each of these properties is further broken into measurable sub-dimensions. In this respect, the financial application is quantified through the universities' funding dependency and accounting inefficiency. The

academic application is rated for curricula development and modularized system. The administrative application is made operational through the appraisal of decentralization/deconcentration and self-governance (see the table 12). Each of these items and sub-items strengthens the measurability of the TQM variable.

Accordingly, this paper advances the assumption that the implementation of these three aspects (governance, financial, and academic applications) as part of TQM will result in high performance in Moroccan higher education. To measure this variable, a 5-Likert scale (5= strongly agree; 1= strongly disagree) have been designed. It comprises 29 items divided into the three mentioned clusters.

IV) Operational Organizational Performance:

The conversion of the four antecedents of the balanced scorecard into well-defined factors that are susceptible to empirical quantification has required their reduction into precise sub-items. Accordingly, the financial perspective gauges the universities' sufficiency of the monetary funds to carry out the BSC. The student/customer perspective measures the satisfaction of students as the primary stakeholders; the internal Processes perspective weighs bottom-line operations and processes, and the learning and growth perspective is operationalized using three elements. These are human, information, and organizational capital (see the table above). The conceptual framework underlying the fourth section of this dissertation brings out the value-added that the balanced scorecard paradigm could create for the Moroccan higher education as the most valid instrument to measure organizational performance.

The balanced scorecard based on Kaplan and Norton's (1992) model has undertaken the assessment of the organizational performance variable. The questionnaire seeks to weigh the respondents' general knowledge of balanced scorecard and university implementation opportunities in prospect. This 5-point, Likert scale suggests 51 items. The scoring method of the measure is a 5-1 key of rating (5= strongly agree; 4= agree; 3= neutral; 2=disagree; 1=strongly disagree).

Table 12: The operationalization of the research variables (measurable factors).

Variables	Operationalizing properties and sub-dimensions
Organizational Culture	-Clan culture -Adhocracy culture -Market culture -Hierarchy culture
Leadership Style	– Transformational leadership. • Idealized influence (attributed) (a). • Idealized influence (behavioral) • Inspirational motivation IM. • Intellectual stimulation IS. • Individual consideration IC - Transactional leadership. • Contingent reward (CR). • Active management by exception (a) • Passive management by exception (p) – Laissez-faire leadership. (LFL1, 2, 3, 4, etc.) – Effectiveness
Total Quality Mangement	– Financial Autonomy/applications. • State funding Dependency • AccountingInefficiency – Academic Autonomy/applications. • Curricula Development • Modularized System – Governance Autonomy/application • Decentralization / Deconcentration • Self-Governance
Organizational Performance (Balanced Scorecard)	– Customer /students perspective • customer /student/ Stakeholder Satisfaction – Learning and Growth perspective. • Human/information –Financial perspective • sufficient financial funds – Internal Process Perspective. • Bottom-line operations

12 Chapter Summary :

This paper's research methodology has covered a lot of ground in identifying and substantiating the empirical process implemented to answer the research questions and achieve the schemed objectives. This chapter is structured around the outlining and justification of the methodological choices related to the investigation and analysis of the research phenomena. On that account, critical discussions of the different processes integral to the empirical procedure have been carried on to cover the theoretical underpinning, data collection, and data analysis (Collis & Hussuey, 2003). Therefore, a cross-sectional mixed-methods approach has been developed based on the pragmatic paradigm to account for the quantitative (positivist) and qualitative (constructivist) methods. This study aims to achieve correlational and descriptive objectives with an explanatory purpose. Correspondingly, an explanatory sequential model has been elaborated contingent upon an abductive approach alternating between inductive and deductive reasoning. Cross-sectional surveys have been elaborated for data collection. Therefore, four self-administered questionnaires have been handed out to the participants to gather quantitative data. In the meantime, semi-structured interviews have been carried out to collect qualitative data. The quantitative research respondents have been selected based on the stratified random sampling technique that seeks to assess the associations and disparities between groups and subgroups of the target population. Meanwhile, the interviewees have been selected based on purposive sampling.

Chapter Three: Structural Equation Modeling and Thematic Analysis Procedures

Introduction (Sequential Data Analysis)

With reference to the explanatory sequential design of this research paper, data analysis has been undertaken in two procedures. The first stage has targeted the analysis of the quantitative data using Partial Least Square – Structural Equation Modeling (PLS-SEM); whereas, the second stage has executed a thematic analysis to process and examine the qualitative data. Triangulation techniques have been integrated throughout the process to ensure the consistency of both types of data. SmartPLS 3 software has been put into operation to account for the statistical data. To approach PLS-SEM method, a detailed course of action entailing a two-stage model assessment has been put forth following the preliminary specification of the formative and reflective modes. On that account, the initial development has sought to weigh the reliability and validity estimates, multi-collinearity, and the significance of weights. In the meanwhile, the second development has been directed toward the meticulous weighing of the causal structural models through the computation of the full range of measures involved in the PLS-SEM package: Significance of Path Coefficients, Coefficients of Determination R^2 , Predictive Relevance Q^2 , Effect Sizes f^2 , and goodness of fit (Hair et al., 2017). Bootstrapping techniques for the appraisal of the significance and relevance of the indicators have been brought into use throughout the PLS-SEM implementation. On the subject of the qualitative data analysis, Braun & Clarke's (2006) thematic analysis has formed the measures plan for the processing and assessment of the outcomes of the semi-structured interviews. This analytical approach has been undertaken following six primary implements: (1) Familiarization with the newly collated output; (2) Inceptive generation of codes (codification of the aggregate data); (3) Themes detection process; (4) Themes reconsideration; (5) Themes delineation; and (6) Reporting Data (Braun & Clarke, 2006). The hypothesis-testing procedure, along with the mediation analysis, have been initiated in the interim to provide substantiated responses to the proposed assumptions and research questions. Therefore, the current research draws its hypothesis testing from the embracement of PLS-SEM *P*-value to validate or invalidate the hypotheses. Regarding the mediation model, the inquisition of the intervening variables' underlying relationships along with the hypothesized causal interrelationships between the exogenous and endogenous variables falls within the Bootstrapping technique's confidence intervals scope of analysis.

1 Initiation to PLS-SEM Method for Quantitative Data Analysis:

For the quantitative data processing operations, the partial least square-structural equation modelling (PLS-SEM) method of data analysis has stood out from loads of competing approaches that sound applicable to this study. PLS-SEM has been substantiated an asset to this research inasmuch as it provides a broader analytical platform for the construction of complex models with the least possible statistical confinement. What is more, PLS-SEM lays the ground for an exhaustive path modelling that encompasses canonical correlation examination, multiple regression analysis, and principal component analysis (PCA) in the form of particular cases. The major distinctive features of PLS lie in its variance-based roots as well as its assortment as a second-generation multivariate method, which qualifies it to decipher both linear and nonlinear correlations between various types of factors. SEM enables the assessment of linear and additive causal models built from a well-defined theoretical framework (Chin, 1998). Structural equation modelling has been introduced as a development of the general linear model in which multiple interconnected equations are synchronously projected to provide and assess the model. PLS is an econometric technique and an outgrowth of the structural equation modelling that has been evolved to deal with the deficiencies of other methods of path analysis prevailing in the 1960s. Thus, its development has come to fill in the vacuum that covariance-based SEM and multiple linear regression (MLR) techniques have left while handling complex path models.

Wold (1985) brought forth PLS in search for an analytical and statistical instrument with a higher operational and dimensional reach than of those conventional methods appertaining to the multivariate analysis type. The resilient and far-reaching nature of PLS-SEM gives a reason for its labelling as a soft-modelling technique. This characteristic refers to the method's elasticity while managing non-normally distributed sample size as well as the handling of measurement scales. Another primary significance of this tool stems from its adequacy in providing a powerful predictive mechanism by drawing out a set of unobserved variables from another group of predictors. In a similar vein, Chin & Newsted (1996) underscore the higher accuracy of the inference orientation along with the non-parametric characterization of PLS. On that account, this study places emphasis on eliciting prediction responses rather than discerning the underlying relationships between the various variables.

The researchers of the social sciences have perceived the edge that PLS-SEM can give over its equivalent methods of path analysis. In this regard, Hair et al., (2010) consider PLS path modelling as the most effective alternative to multiple regression. Similarly, Hair et al., (2006) categorize the structural equation modelling among the class of the statistical models that can substitute the multiple regression equation. Additionally, the comprehensive PLS regression comprises both multiple linear regression (MLR) and principal component analysis (PCA). Hair et al., (2011) make it clear that the covariance-based approach (CBSEM) and PLS-SEM variance approach are quite distinct from one another; the former works towards the corroboration of theories, whereas the latter functions like multiple regression analysis. Another differentiation from PLS lies in that multiple linear regression is mostly deployed when a few factors are addressed with no existing collinearity between them. Along similar lines, Babin et al., (2008) highlight this method's efficacy in the measurement of the latent variables in parallel with its investigation of the interconnections between the indicators (observed variables). Indeed, the bottom line of PLS is embodied in extracting latent factors relying on the manifest factor variation. What is more, data distribution is another issue that is successfully handled by PLS as it tolerates the processing and analysis of non-normal distributions. PLS imposes only fundamental assumptions on how data should be partitioned and the way variables should be measured. This denotes that PLS is more extensive than MLR. Prioritizing PLS-SEM over the CB-SEM and MLR draws its strength from its ability to account for latent variables (unobserved factors) with more efficiency and with very elaborate models.

2 Advocacies for Implementing PLS-SEM as a Method of Data Analysis:

For the exclusive empirical context of this study, PLS-SEM has predominantly been deemed the most congenial statistical method for data processing and analysis. Above all, the selection of this methodological alternative from among wide-ranging approaches of path modelling (namely, covariance-based SEM (CB-SEM), Nonlinear Universal Structural Relational Modeling (NEUSREL), and Generalized Structured Component Analysis (GSCA) etc.) has been grounded on a series of PLS-SEM implementation arguments as well as detailed procedure-related issues and justifications. Meanwhile, the primary rationales for PLS-SEM adoption are drawn from the nature, structure, and objective of the current paper as reasoned out in the following assets:

The sophisticated nature of the study suggests an advanced PLS path model. This cross-sectional mixed method study has yielded an intricate empirical model that comprises a complex web of interrelated direct and indirect relationships between different types of variables. Accordingly, PLS puts up with the use of an indefinite number of predictors and criterion variables while indulging collinearity between them due to its nonparametric procedure. This hints at the inherent inadequacies of deciphering these correlations applying a simplified method of data analysis. Therefore, the proposed model involves a thorough account of the underlying latent variables and indicator variables. On that account, the measurement of these factors altogether requires the development of elaborate PLS path models that ensure uncompromised estimation of the empirical framework. This is in line with Westland (2007), who identifies SEM's process with the appraisal of the scales' properties for the sake of measuring the theoretical constructs as well as evaluating the correlation of the postulated constructs. Additionally, the investigation and computation of the imperceptible (unobserved) latent constructs prioritize largely this method over its rivals, which account for the observed factors. Furthermore, the complexity of the model has been illustrated through the projection of the latent and manifest variables in two modes of assessment. These are structural and measurement patterns. What is more, the evaluation of the measurement and structural models provides well-substantiated answers and discussions on the interwoven questions of this study.

The structure of the empirical model revolves around the PLS path modelling due to its resilient and distribution-free conditions of the sample size. Thus, the lack of confining distributional prerequisites contributes to the flexibility and broadness of PLS. This insinuates that PLS path modelling tolerates the skewness of data (Bagozzi, 1994). Therefore, discarding the normal distribution provides depictions of the symmetric distributions of the values of different variables. This supports further the convenience of the PLS to the processing and examination of the non-normal distributions (Chin, 2010). This lines up with the analysis of the non-normally constructs in this study. Besides, PLS has the capacity to treat small and medium sample size and does not specify any minimum figure of cases for a particular measurement. Therefore, PLS-SEM is given priority over CB-SEM when the researcher collects a small sample size (Hwang et al., 2010).

The predictive objective of this study advocates the use of PLS. The overriding goal of the empirical model is embodied in elucidating and inferring the correlational liaisons conjoining the predictors, mediators, and the criterion. By so doing, the significance of the predictive model

outweighs the estimation feature in this study. PLS alternative to SEM accounts for the predictive and explorative model of causality in this study. Hair et al., (2011) recommend the use of PLS for a predictive objective. Besides, PLS permits the gauge of the preliminary theoretical assumptions with the constant reference to the obtained empirical outcomes. The PLS-SEM technique has been corroborated as the most compatible statistical tool to build and confirm the practical model of this study owing to its flexibility in handling highly developed modes and perplexing sample distributions as well as its precision in predicting intricate correlations.

3 PLS-SEM Execution Procedure :

For the comprehensive administering of PLS-SEM, the ensuing course of action has been put forward contingent on the recommendations and guidelines provided by Hair et al., (2017). Therefore, this study's overall structural framework has been elaborated through the initial process entailing the specification of the outer (measurement) and the inner (structural) models, followed by the estimation of both models. This aligns with Hair et al., (2014), who suggest that the first stage of PLS-SEM execution should be the development of a path model underlying the associations between constructs and variables on the grounds of theory and logic.

In the same vein, the initial phase should be devoted to the inspection of the reliability estimates, convergent validity, and discriminant validity. Whereas, the subsequent level of data analysis entails the running of factorial validity, multicollinearity, and significance and relevance of outer weights (Hair et al., 2017). Regarding the first assessment, it consists of weighing the outer/measurement model from two modes: reflective and formative indicators evaluation. This is in line with Loehlin (1998), who underscores the significance and criticality of assessing the measurement model for the quantification of the reliability and validity of the unobserved (latent) constructs, along with their observed (manifest) variables.

The reflective assessment involves the examination of the internal consistency using composite reliability. Ultimately, testing validity estimates are undertaken by implementing convergent and discriminant validity. The subsequent stage comprises the assessment of the formative indicators. This stage is initiated for the sake of confirming the validity of the model through the running of the nomological validity as well as the external validity (content and face validity). What is more, the significance of weights measure has been estimated for the quantification of the constructs. Meanwhile, the bootstrapping technique, along with multicollinearity tests, have been

implemented for assessing indicators. It is noteworthy mentioning that the current study model contains no formative assessment and that all the indicators are reflective. As far as the second assessment is concerned, a process has been initiated immediately after the substantiation of the measurement model to assess the inner/structural model by carrying out the following statistical techniques:

Table 12: Data Analysis Procedure Based on the PLS-SEM Applied Algorithm. Adapted from Hair et al., (2017)

I)- Specification of measurement and structural models	
II)- Weighing the Outer/Measurement models:	
A - Reflective Measurement Models	B- Formative Measurement Models
• Internal consistency : (Composite reliability). • Convergent validity, Factor Cross Loadings, Average variance Extracted. • Discriminant validity.	• Convergent validity • Collinearity between Indicators. • Significance and relevance of outer weights.
III)- Weighing the Inner/Structural models:	
• Path coefficients (Hypothesis Testing). • Coefficients of determination (R^2). • Predictive relevance (Q^2). • F^2 effect sizes. • Goodness of Fit • Mediation Analysis.	

- ✓ Endogenous latent variables evaluation using coefficients of multiple determination (R^2).
- ✓ Path coefficients estimation for the appraisal of the statistical relevance and significance of the structural model.
- ✓ F^2 , the effect size for the quantification of the impact of the exogenous variables on the endogenous variables.
- ✓ The predictive pattern of the model is checked out, employing the predictive validity or relevance Q^2 .

This section provides a thorough discussion and elucidations of each step of the above data analysis procedure based on the PLS-SEM applied algorithm.

4 PLS-SEM Path Model specification:

PLS path modelling centres around the specification of a series of models to account for the underlying structure and relationships between latent and manifest variables. The probing inquiry of these correlations is made possible through a detailed paths representation of direct and indirect associations and effects. Therefore, this research's path model takes the shape of a diagram, which substantiates and exhibits the formulated hypotheses and goes into details regarding the predicted relationships between diverse types of variables. In this regard, two integral developments entailing two sets of linear equations, namely the measurement (outer) and structural (inner) models lie at the heart of the applied PLS-SEM method in this paper. On that account, this diagram represents the hypothesized path model of the current research that has been drawn from the insights of the four fundamental conceptual frameworks of this study. Indeed, this research has been built based on substantial conceptual and theoretical underpinnings that pave the way for the investigation of the postulated predictive associations.

Additionally, the cause-effect relationships have been established based on logic as well as experts' recommendations drawn from thorough scrutiny of the relevant theory and research.

Regarding the elaboration and distinction between the inner and outer paradigms, they have been designed based on the correlation analysis that each of them investigates. On that account, the inner pattern probes into the connections among latent variables, whereas the outer component goes into details concerning the associations between manifest (indicators) variables and unobserved (latent) constructs.

Subsequent to the preliminary determination of the model, the following phase involves putting to test the formulated model through the systematic contrasting of the fundamental model with the obtained data. The ultimate process includes refitting and adjusting the model. The modification process is achieved through either reconsidering the connotation of particular constructs or/and the removal and incorporation of specific paths to bring about the sought-for model fit. The figure 25 provides an illustrative depiction of the nature of the relationships that administers latent and manifest variables entailing inner/outer as well as reflective/formative models of assessment.

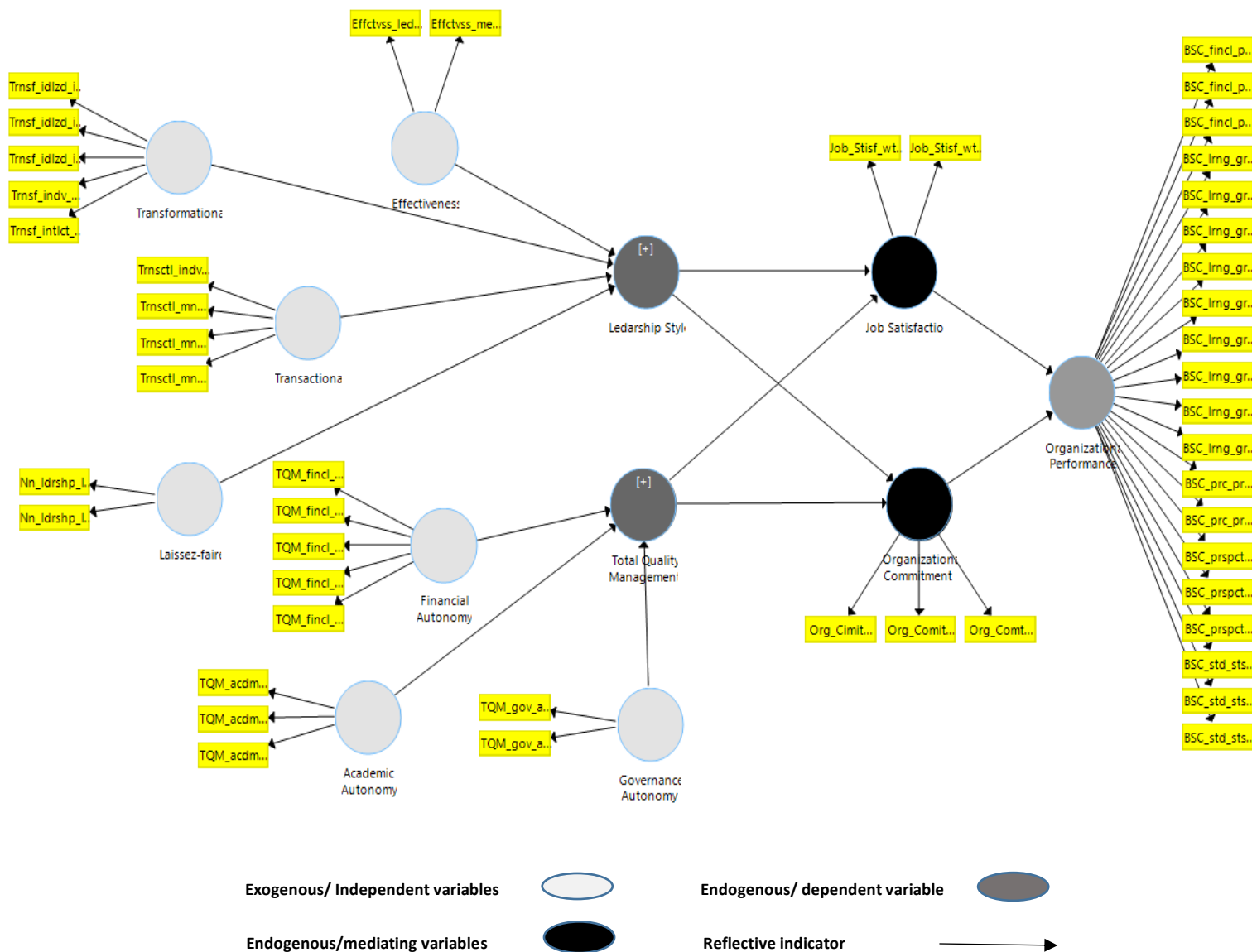


Figure 25: The Research Least Squares Path Model

Table 13: The Research Constructs and their Corresponding dimensions and Indicators

Constructs	Corresponding Dimensions	Corresponding Indicators
Ldr Styl (Leadership Style)	– Transformational leadership (trnsf ldr).	Trnsf_idlzd_inflc_atrbt_gd_grp
		Trnsf_idlzd_inflc_atrbt_pwr_cfdnc
		Trnsf_idlzd_inflc_bhvr_clctv_sns_mssn
		Trnsf_idlzd_inflc_bhvr_strng_sns_prps
		Trnsf_indv_cnsdr_cnsdr_difr_ned
		Trnsf_intlct_stml_critc_assmpt_rexam
	– Transactional leadership (trnsc ldr).	Trnsctl_indv_cnsdr_dvlp_othr_strgth
		Trnsctl_mngmt_exptn_actv_fcs_trck_mstk
		Trnsctl_mngmt_exptn_psf_flr_intrf_prbl
		Trnsctl_mngmt_exptn_psf_inrtf_chrc_prbl
	– Laissez-faire leadership (lssz fr).	Nn_ldrshp_lssz_fr_dcisn_avdnc
		Nn_ldrshp_lssz_fr_invlvmt_avdnc
	– Effectiveness (Effect)	Effctvss_metng_jb_ned
		Effctvss_led_grp_efctv
TQM (Total Quality Mangement)	– Financial Autonomy/applications (fin auto/app).	TQM_fincl_auto_mng_avbl_bdgt
		TQM_fincl_auto_affct_absnc_inffncy_accnt_bdy
		TQM_fincl_auto_mng_univ_shft_stat_ovrsght_gov
		TQM_fincl_auto_rcrut_mntrd_stat
		TQM_fincl_auto_undrtk_govng_brds
	+-- Academic Autonomy/applications (Acdd auto/app).	TQM_gov_auto_afct_pstvlly_perf
		TQM_gov_auto_slf_gov_mde
	– Governance Autonomy/applications (Gov auto/app).	TQM_acdmc_auto_acdmc_yr
		TQM_acdmc_auto_std_sbmsn
		TQM_acdmc_auto_stf_rcrut
Job satsf (Job Satisfaction)	-----	Job_Stisf_wth_TQM_Outcomes
		Job_Stisf_wth_TQM_implm

Org comit (Organizational commitment)	-----	Org_Comitmt_Ledr_implm_TQM
		Org_Comitmt_Extr_efrt_try_hdr
		Org_Comtmt_Extr_efrt_dg_mr-thn_expt
Org Perf (Organizational Performance)	-----	BSC_fincl_prspctv_adpt_slf_mngt
		BSC_fincl_prspctv_implt_anul_bgt
		BSC_fincl_prspctv_implt_extrl_fnd
		BSC_lrng_grwth_prspctv_hmn_cptl_slf_asesmnt
		BSC_lrng_grwth_prspctv_Info_cptl_imprvment
		BSC_lrng_grwth_prspctv_Info_cptl_trng_IS
		BSC_lrng_grwth_prspctv_hmn_cptl_dvlp_cmptc
		BSC_lrng_grwth_prspctv_hmn_cptl_rwrđ
		BSC_lrng_grwth_prspctv_org_cptl_aprprt_envrmt
		BSC_lrng_grwth_prspctv_org_cptl_empty_mtvtn
		BSC_lrng_grwth_prspctv_org_cptl_gols_mission
		BSC_lrng_grwth_prspctv_org_cptl_imprvment
		BSC_prec_prspctv_dy_t_dy_oprt_trng
		BSC_prec_prspctv_rglr_msrmnt
		BSC_prspctv_univ_custmr_prspctv
		BSC_prspctv_univ_fincl_prspctv
		BSC_prspctv_univ_lrng_grwth_prspctv
		BSC_std_stsf_giv_qulty_educ
		BSC_std_stsf_invlv_desic_mkg
		BSC_std_stsf_srvy_expt

4.1 Developing and Specifying the Measurement Model:

In PLS-SEM, the measurement model represents the outer demonstration of the model. It is a depiction of the linkage that brings together latent variables (LVs) and manifest variables (MVs). On that account, two types of variables (indicators and constructs) are determined in this segment of the path model. Meanwhile, it is noteworthy stressing that the codification of the observed indicators and unobserved constructs into boxes and ellipses respectively permits the delineation of the governing correlations underlying these two types of antecedents. These combinations portray the associations converging a block (a set of indicators) to an individual construct. This prompts the condition that each block should contain at least one MV. This also denotes that every LV (construct) possesses its particular block of indicators (MVs).

The rule of thumb related to this correlation dictates that each manifest variable is indulged in linking a single latent variable. A one-way direction of the arrows is deployed to disclose the associations between LVs and MVs. Accordingly, this research's path model provides an illustrative depiction of the nature of the relationships that administer the exogenous latent variables. Therefore, the predictive relationships schematized in the above diagram by the single-headed arrows from the indicators to the constructs have been vigorously substantiated throughout this paper's theoretical and conceptual frameworks. Therefore, they are interpreted as viable causal relationships—the expression of causality between variables is conveyed through the direction of the arrows. Hence, the unidirectional arrows are the critical determinants of the measurement of the latent variable. Correspondingly, the measurement model starts from the left side, which consists of the indicators that fit each of the three exogenous/independent latent variables on the right side of the model.

These established correlations are displayed in two distinct modes of PLS-SEM method. In the current study's path model, *reflective* partitions entail the measurement of the exogenous/independent as well as Endogenous/ dependent latent variables. This is portrayed with the arrows pointing from the constructs to the indicators as follows:

The designed reflective mode exhibits the destination of the unidirectional arrows from the construct to the indicators. Thus, it accounts for the exogenous endogenous variables, which provides evidence of the indicators deployed to test the constructs. The present reflective schema discloses a single source of causality, which presumes a substantial correlative linkage among the indicators. A major characteristic of the reflective indicators lies in their interchangeability. This denotes that in the case of the omission of single items, the essence and significance of the construct should remain without alteration (Hair et al., 2017). In all, the

overall reflective assessment of the entire sets of the exogenous and endogenous latent variables are drawn from the replies elicited from the integrality of the related indicators.

Concerning the formative model typifies the linear associations and modelling of the constructs. The formative assessing indicators are characterized by the lack of the interchangeability feature, which denotes that each of them examines a separate aspect of the construct (Hair et al., 2017). In the meantime, the same criterion to distinguish both types has been proposed by Jarvis et al., (2003), who probe into the determinant of interchangeability of the items. They conclude that the measurement should be reflective in case the items display interchangeability, whereas they ought to be formative when they show no indication of this feature. Rossiter (2002) delves into the cause-consequence disparity or embodiment of the constructs and holds that the former (cause) calls for the formative mode of assessment while the latter (effect) requires the reflective type. In the meantime, the above diagram does not involve any formative causality of the exogenous or endogenous variables to account for the associations gathering the constructs and their matching indicators. An overview of both types of reflective and formative partitions is provided in this chapter.

5 Developing and Specifying the Structural Model:

The structural model embodies the underlying relationships between latent variables (LVs) by providing a depiction of the way they are associated in terms of featuring the constructs and identifying their matching combinations. By definition, latent variables or constructs refer to the unobserved factors that are not weighed straightly in contrast to the indicators, which are the manifest or observed variables that bear straightforward measurement (Kline, 2005). Latent variables identification constitutes an integral part of the structural model design and computation. What is more, both categories of antecedents are further broken into exogenous and endogenous latent variables (as previously stated in the measurement model). The significance of this partition at the level of the structural identification of the model lies in specifying whether the variable is predicted by a predecessor factor (endogenous) or is not affected by any factor (exogenous). Accordingly, the dependent variables fall within the former assortment of predicted factors, whereas the independent ones appertain to the latter division, which predicts and explains other variables. In this respect, exogenous latent variables refer to the constructs, which describe and elucidate the remaining constructs throughout the model, whereas endogenous latent variables represent the variables that are explained and annotated. Meanwhile, the posited associations underlying the exogenous/independent constructs, transformational, transactional, laissez-faire, and effectiveness (leadership style); and financial,

academic and governance autonomies (total quality management) with the endogenous/dependent variable organizational performance, requires third intervening elements. The mediating components provide logical substantiation to the predictive/causal relationships between predictors and outcome factors. Thus, job satisfaction and organizational commitment are incorporated as intervening antecedents. They function as endogenous latent variables that account for the path model with reference to the indirect effect. They derive their endogenous characteristics from the assumption that they bear the impact of the three exogenous latent variables and translate them into the endogenous latent variable (organizational performance). This also denotes that these two endogenous latent (job satisfaction and organizational commitment) variables function as both independent and dependent factors. This insinuates that the predictive arrows can be directed into or come from or solely oriented towards these two antecedents.

In the meantime, a highlight of the unexplained variance during path model estimation is essential. Thus, the assignment of error terms to the latent variables whose measurement is carried out through causal indicators allows covering additional and interpretable causes related to the discarded variables in the model (Diamantopoulos, 2006). On that account, error terms are annexed to the reflective measures, whereas the formative modes are error-free (Diamantopoulos, 2011).

6 First Assessment: Weighing the measurement (outer) models:

For the statistical evaluation of the research outcomes, the reflective and formative models are thoroughly assessed.

Reflective Measurement Models:

The course of action underlying the assessment of the reflective measurement models is as follows:

- ✓ Validity Estimates: For the assessment of the convergent validity related to the scale items, two measures have been put to execution. These are factor loadings (Hair et al., 2014) and the Average Variance Extracted (Fornell & Larcker, 1981).
- ✓ Discriminant validity: two measures are put in operation for the execution of discriminant validity: Cross-loadings and Fornell Larcker's criterion (AVE).
- ✓ Reliability Estimates: composite reliability is deemed the most suitable estimates of Internal Consistency Reliability Estimates.

Formative Measurement Models:

The course of action underlying the assessment of the formative measurement models is as follows:

- ✓ Content validity: a content inquest of the validity of the formative indicators has been carried out at the introductory phase of the formative model's evaluation. The external validity consists of the investigation of the content and face validity.
- ✓ Convergent validity test through the estimation of redundancy indicant
- ✓ multi-collinearity check using VIF indicant
- ✓ Bootstrapping technique for the weighing of the significance and relevance of the formative indicators.

6.1 Reflective Measurement Models:

6.1.1 Validity Estimates:

Validity reports have decided on two broad assortments in the literature internal and external validities. Internal validity has been ascribed to the research susceptibility to duplication and reproduction (Willis, 2007). External validity accounts for the likelihood of representativity and generalizability of the findings from a given sample to broader subject areas (Graziano & Raulin 2006). Meanwhile, Carmines & Zeller (1979) single out three methods of assessing measurement instrument validity. These are construct validity, content validity, and criterion-related validity. What is more, Huck (2007) identifies another form, which is face validity. These measures are further categorized into subjective versus objective typologies. In this regard, Campbell (1990) prefers objective measures to subjective ones due to their accuracy and plausibility. Indeed, subjective tools such as face validity and content validity are prone to severe biases as the testers (reviewers) rely on their impressions and perceptions to provide judgments. Despite all this, the current piece of research deems content validity a crucial mechanism to validate the proposed instruments. In a similar vein, face validity has been adopted as a validation method in this research.

6.1.2 Criterion-related Validity:

This method works by contrasting one criterion appertaining to a measurement instrument with a hitherto established tool to account for its accuracy (Leedy & Ormrod, 2004). This form of validity is not feasible for the ongoing study, and therefore, it has been set aside from the validation process of the instruments.

6.1.3 Construct Validity

It has been established as a fundamental requisite for the validation of the measuring tools of any decent research. It refers to the degree to which a test assesses what it claims to measure (Brown, 1996). It accounts for the interrelations between the variables of given research and how they align with the prevalent theoretical stream (Mills & Morrison, 2003). This type of validity is further broken into convergent validity and discriminant validity. Both types constitute integral components of construct validity (Rossiter, 2002). Therefore, the running of these validity check techniques provides firm credibility to the present research measurement instruments OCAI, BSC, and TQM. Meanwhile, the distinction between convergent and discriminant validity analyses lies in that the former authenticates the connections between the variables, which are hypothesized to be linked. Whereas the latter accounts for the dearth of the correlations between the constructs which are presumed to bear no relation to each other.

6.1.4 Convergent validity

It serves to ascertain that items listed for the quantification of a particular construct in a measurement instrument do quantify that specific construct. It ponders on examining whether two constructs, which are characterized as sharing identical theoretical features, draw substantiation from the collected data. Thus, it takes the measure of the extent to which individual items load into the matching constructs. The examination of the convergent validity seeks to approve the content of the different elements. In this regard, Kock (2013) deems a measurement instrument as possessing adequate convergent validity when the question statements convey a similar meaning to all the participants. For the assessment of the convergent validity related to the scale items, two measures have been put to execution. These are factor loadings (Hair et al., 2014) and the Average Variance Extracted (Fornell & Larcker, 1981). Typically, a value of less than 0.50 is demonstrative of a lack of convergent validity. Thus, inadequate convergent validity results would mean that the formative appraised indicators of a specific construct fall short of displaying a sufficient contribution to the model's meaning. In such a case, a necessary rectification entailing the substitution or/and addition of the indicators of the formative construct should be undertaken.

6.1.5 Discriminant validity

It weighs how much a measure is unparalleled and does not encompass other factors (Peter & Churchill, 1986). This validity test aims at confirming that the measuring variables

utilized to assess various phenomena are not utterly correlated. Otherwise stated, it is a depiction of how measures of the multiple constructs are different from one another, and therefore, bear no resemblance to those measuring distinct constructs. It is an affirmation of the measure confinement to a construct. More broadly, discriminant validity ensures that the measures that are not posited to correlate theoretically are not associated empirically. Building on PLS-SEM, two tests are put in operation for the execution of discriminant validity: Cross-loadings and Fornell Larcker's criterion (AVE). Therefore, this validity analysis has been carried out through the estimation of the cross-loadings of all items belonging to the constructs as well as the square root of Average Variance Extracted (AVE) weighed for every single construct. Fornell & Larcker (1981) recommend the comparison of the construct's variance extracted with the fitting inter-construct squared correlations. Chin (2010) holds that cross-loadings are the outcome of correlating each latent variable's component score with every single indicator.

6.1.6 Internal Consistency Reliability Estimates:

In this research, the Internal Consistency Reliability method has been advantaged to account for the three survey questionnaires. For more accuracy of choice and implementation of the most relevant estimators, the researcher has gone through a broad range of internal consistency indices. The examination of Inter-item correlation, Item total correlation, Split-Half reliability, Cronbach's Alpha, and Composite Reliability has provided crystal clear empirical evidence of the apt techniques to proceed with the reliability tests. Concerning the Inter-rater correlation, it requires multiple investigators (at least two observers) to delineate the ratings contingent on behaviour or judgment. The nature of this estimate sets side any option of having it as a test of reliability as this study has been carried out by one researcher. Meanwhile, other forms of reliability measures such as Split-Half and Test-retest are of no use to this study. The latter is particularly used in longitudinal research where similar variables are put to the test and reexamination during a particular period. Consequently, composite reliability is deemed the most suitable estimate to process the proposed measurement frameworks.

6.1.7 Composite Reliability:

For the accurate assessment of the internal consistency reliability, two indispensable estimates can be harnessed throughout the reflective part of the evaluation of the model. Cronbach's alpha and composite reliability have been established as the most conventional fundamentals for measuring reliability (Fornell & Larcker, 1981; Henseler, 2010).

Indeed, the majority of the researchers opt for Cronbach's α to measure reliability (Cronin & Taylor, 1992). It enjoys widespread approval and recognition as a reliability indication in management research (Brownell, 1995). It is the most deployed internal consistency estimate that is chiefly constructed as the mean of all potential split-half coefficients (Cortina, 1993). This indicator targets to assess properties of testable or mutable features. Meanwhile, composite reliability provides elucidations of the consistency of the latent construct indicators in terms of their contribution to the assessment of their corresponding constructs (Koufteros, 1999). While both statistical options have been substantiated to provide a comprehensive big picture of the internal consistency reliability, each technique displays distinctive characteristics. In this regard, one of the most interesting divergences between these tools lies in the way that each perceives and assesses indicators. On that account, Cronbach's alpha handles the sets of indicators with the presumption that they possess equal reliability, whereas composite reliability takes into consideration the discrete loadings of different indicators (Henseler, 2010). Thus, Cronbach's alpha stipulates minimum requirements of certain criteria such as equivalent factor loadings and disassociated errors to ensure a fair degree of reliability. This denotes that the first approach does not take into account the factor loadings related to indicators, whereas composite reliability estimates them. However, this disparity in evaluating the internal consistency reliability of the latent variables is reduced with the relatively unified coefficients adopted by both techniques (Nunnally & Bernstein, 1994). Accordingly, Cronbach's α reliability of each scale is only confirmed if its value is equivalent to or higher than 0.7 (Nunnally, 1978), even though 0.6 is deemed acceptable Nunnally (1967). Meanwhile, Van de Ven & Ferry (1979) suggest that coefficients that depict narrow constructs fall within the range of 0.70 to 0.90, whereas coefficients characterizing moderately broad constructs fit into 0.55 to 0.70 estimation. In this sense, the reliability coefficient starts from utter default of correlation = zero to complete or perfect correlation = +1. Meanwhile, the resilient type of Cronbach's α computation allows for the achievement or approximation of the predetermined 0.7 average through either omitting some items or else recalculating till an adequate coefficient is attained for every single dimension (Churchill, 1979). This method allows the assessment of the extent to which reliability would improve or worsen when a specific item is discarded. In the meantime, the values that exceed 0.6 are deemed as demonstrative of good composite reliabilities (Bagozzi & Yi, 1988).

In all, the composite α is the value measure of internal consistency that has been calculated in this study in line with Bagozzi & Yi's (1998) recommendation to substitute Cronbach's Alpha with Composite reliability in SEM. Therefore, the internal consistency of the

subscales within each scale has been computed to gauge the extent to which the outcomes appraised by an instrument are consistent (Graziano & Raulin, 2006).

6.1.8 Bootstrapping Significance and SmartPLS Software:

Bootstrapping procedure to assess the significance and relevance of the formative indicators is deployed based on the non-normal distribution of data. This is “a non-parametric procedure that can be applied to test whether coefficients such as outer weights, out-loadings and path coefficients are significant by estimating standard error for the estimates” (Garson, 2016.p, 29). This tool is advantageous in the sense that it enables the drawing of a sizeable number of subsamples (e.g., 5000) from the initial sample. This is possible through the replacement process that yields bootstrap standard errors. Thus, the larger (original) sample serves to ‘bootstrap’ or duplicate smaller samples with repeated replacement. Resampling allows for the generation of multiple implications of the original dataset. This recursive process saves efforts and time and necessitates a minimum knowledge of mathematics or probability theory (Wood, 2005). This goes in line with bootstrapping description as “a resampling approach that draws random samples (with replacements) from the data and uses these samples to estimate the path model multiple times under slightly changed data constellations” (Hair et al., 2013.p, 162). Indeed, bootstrapping metric draws from the random sampling with replacement to bootstrap any number in PLS. This offers solutions that other ‘parametric’ techniques fail to provide. Thus, it performs well with large sample sizes (i.e., when each group contains 15 to 20 items) and when the distribution is proven to be not normal. Meanwhile, to ensure that the data is non-normally distributed, the Skewness and Kurtosis tests are run to confirm that they deviate much from 1.0. Once the non-normality is established, the non-parametric test chi-square test (or another) is utilized to provide meaning to the outcomes. In this study, the Skewness and Kurtosis tests are intended to reveal the adequacy of the non-normal distribution of the data, and therefore, PLS path modelling has been favoured since it can handle highly skewed data (Bagozzi & Yi, 1994).

To proceed with bootstrapping, SmartPLS is the most compatible software to execute this routine in this study. This is drawn from its capacity to generate T-statistics for the assessment of the significance of both the inner and outer models using bootstrapped samples. A little expertise is required for the running of SmartPLS bootstrapping. Accordingly, for the initiation of the process, three major stages should be put into effect: the initial phase entails the resampling of data 5000 times; the subsequent operation requires the determination of the

bootstrap statistic regarding each of the 5000 samples; the ultimate step involves harnessing the standard deviation to calculate standard errors. The generation of bootstrap standard errors paves the way for yielding approximate T-values that serve to evaluate the significance of the measurement and structural paradigms. It is worth mentioning that bootstrapping procedures are applied to assess the significance and relevance of both the formative indicators in this study. This is in line with Wong (2013), who maintains that the calculation of the T-statistics (Mean, STDEV, T-values) provides evidence of the significance or insignificance of a particular formative indicator's outer weight.

6.2 Formative Measurement Models:

In conformity with PLS-SEM, various statistical measures can be very functional to the assessment of the formative index. The course of action underlying the application of the partial least square entails content validity, convergent validity through the estimation of redundancy indicant, and multi-collinearity check through VIF indicant. Therefore, a content inquest of the validity of the formative indicators has been carried out at the introductory phase of the formative models' evaluation. This process requires a survey of the primary aspects of the construct through analytical substantiation and expert appraisal. The initial stage requires the determination of the integral sets of the pertinent indicators of the construct. The objective is to operationalize the formative constructs based on extensive theoretical and analytical grounds to determine the quality of the formative index (Hair et al., 2017). Meanwhile, the assessment of the significance of the formative indicators has been carried out by the bootstrapping procedure. Therefore, if an indicator displays a value that is < 1.96 , then it is insignificant (Wong, 2013). Similarly, any PLS bootstrap output exceeding 1.96 has been established to be significant at the .05 level (Hair et al., 2016). This necessitates the examination of its outer loading's significance. What is more, in the extreme case where both the outer weight and outer loadings disclose insignificance, the indicator has to be discarded (Wong, 2013).

6.2.1 Content Validity:

An instrument is characterized as having content validity when testers and analysts of the measure display a clear consensus about the ability of the toolset of items to cover the constructs they are meant to examine. Although this measure has been grouped among the subjective means of validity account, its significance lies in its provision of the methodological underpinning upon which the measures' validity can be appraised. This gives reason to the comprehensive agreement and recommendation of this testing apparatus among researchers.

Content validity takes the shape of experts and academics review of the content of the measuring instrument. Their focus is typically on the adequacy of the incorporated items while avoiding the inclusion of extraneous factors. This is in line with Leedy & Ormrod (2004), who state that this kind of validity interrogates the measure's coverage of the areas that it is required to go through. Following this, the questionnaires of this research have been put through the procedure of content confirmation either by adhering them to the piloting phase or by collecting feedback from academics and experts. Another way to ensure the content validity of the four questionnaires has been the adoption of the underlying perspectives elaborated originally by the designers of the measures.

6.2.2 Face validity:

Most of the researchers consider this form of validity as unnecessary and a mere addition to the rest of the measures (e.g., construct validity). However, it serves to explicate the apparent congruence between a research instrument and a particular attribute it claims to measure. Otherwise stated, it provides outward evidence of the scale's soundness and intactness as an assessment approach to achieve an objective. This study takes advantage of what seems to be vulnerabilities of this measure to form a strong point in favour of the robustness of the developed measurement frameworks. Clearly, the four instruments of this thesis seem to display high face validity, as they all seem to quantify the same attribute. This has been illustrated throughout the four suggested conceptual frameworks.

The implementation of the previously listed techniques (convergent validity, multicollinearity, and the significance and relevance of the formative indicators) takes place at two levels of statistical processing and analysis. These are the indicators and constructs parameters estimation. Indeed, since the PLS-SEM method is founded upon the investigation of the dichotomy construct-indicator, a two-step procedure has been applied in the formative gauge of the outer model. This is in line with Henseler (2010), who recommends the running of both analyses related to constructs as well as indicators for the formative model validity. Accordingly, the initial determination of the construct level aims to provide evidence of its confinement to the proposed hypotheses. This analysis extends to the subsequent examination of the indicator's standing, which elucidates the significant addition of every individual indicator to the overall content of the formative paradigm. Subsequently, the entirety of the formative model is put under meticulous scrutiny using the nomological validity to prove its strong relationship to the remaining constructs. The nomological analysis provides the answers

for the inquisitions. Investigating how the formative evaluated constructs and indicators operate within the outer model, as well as the pertinence of the suggested hypotheses are of utmost cruciality for the entire model.

6.2.3 Convergent Validity:

The formative model assessment proceeds through the empirical computation of convergent validity. This test determines the degree of the association between the measures of the studied phenomenon (Hair et al., 2014). It examines whether the formative construct displays a high correlation with a reflective measure of a particular construct (Hair et al., 2017). The redundancy indicant is deployed to assess convergent validity. Redundancy denotes that the incorporated information in the formative construct is reproduced (recursive) in its reflective counterpart. This measure establishes the correlation between every single formative construct and an equivalent reflective measure of a particular construct. Typically, a value of less than 0.50 is demonstrative of a lack of convergent validity. The outcome from this measure manifests how robust is the path coefficient associating the formative constructs and reflective indicators. Therefore, a path coefficient is deemed strong when it scores 0.70 and more (Hair et al., 2017). Thus, inadequate convergent validity results would mean that the formative appraised indicators of a specific construct fall short of displaying a sufficient contribution to the model's meaning. In such a case, a necessary rectification entailing the substitution or/and addition of the indicators of the formative construct should be undertaken.

6.2.4 Multi-collinearity:

An issue of significance to this study is collinearity. The affirmation of a mutual relationship between more than two indicators signifies the existence of multi-collinearity among the predictor variables. Meanwhile, the inherent presumption underlying the forming of the formative index theorizes on the lack of inter-correlation among these factors. Unlike the reflective models, this measure is particularly important to the formatively constructed pattern since indicators are posited to disclose no trace of interchangeability. This test is similar to the multiple regression analysis (Mooi & Sarstedt, 2011). Thus, in case that an excessive multi-collinearity predominates the association between different formative indicators, it may yield distorted results. Indeed, a high average of interdependence denotes that various variables (at least two) weigh an identical construct instead of accounting for varied constructs (Kline, 2005). A major downside is manifested in the inflation of the variances, which insinuates a significant magnification of the genuine values of the variables. On that account, excessive multi-

collinearity jeopardizes the accuracy of the obtained data, which may yield erroneous statistical inferences. What is more, perfect interconnections cause bias as two or more indicators may intermingle in the same block of indicators holding identical information (Hair et al., 2017). In the meantime, Kock & Lynn (2012) distinguish between two types of collinearity related to latent variables. They suggest two levels of inter-correlation processing: the first analysis probes into the predictor-predictor investigation employing the vertical inspection; whereas the second type goes into details regarding the lateral collinearity among predictors-criterion dichotomy. To process the data and decide on the existence of multi-collinearity and its extent, the Variance Inflation Factor (VIF) is the prevalent indicant (Fornell & Bookstein, 1982). The initiation of the VIF analysis allows the examination of multi-collinearity among the indicators and latent variables. VIF is the estimation of how much the variance of an indicator is explained by the rest of the indicators of a particular construct. A VIF's value should not exceed 5 even though Hair et al., (2016) propose even a more resilient criterion and maintain that VIF should be inferior to 10. Any VIF values that surpass 10 display a severe degree of multi-collinearity. However, the values that score beneath the admissible threshold of 10 are discarded from being serious concerns to the formative models (Gujarati, 2003). When treating indicators, the decision to integrate an indicator or disregard it from the formative index ought to be based on the analysis of multi-collinearity. This is due to the numerous methodological and interpretational complexities that result from the indicators with excessive inter-correlations or multi-collinearity.

6.2.5 Significance of Weights:

Another criterion that affects the decision to retain an indicator or not is the estimation of the level of significance of the indicator's weight. Therefore, each formative indicator's significance, as well as relevance, are put under scrutiny. Meanwhile, Jarvis et al., (2003) warn against the omission of formative indicators based merely on the statistically drawn outcomes. They argue that such a decision would distort the essence of the formative index, which is built upon a well-substantiated theory. When the final estimation of the weights of indicators is undertaken, a further checkup should be carried out. Therefore, the loading test (the bivariate correlation) is necessary when the weight of the indicator discloses non-significant value (Hair et al., 2014). This allows the making of a justified decision concerning the deletion of the insignificant indicators. Hair et al., (2014) hold that the determination of the contribution of each index to the development of the fitting construct is carried out through measuring and comparing the indicators' weights for the final evaluation of the relevance of the component.

Therefore, to account for how significant is the impact of an indicator on the formative paradigm, Bootstrapping routine is utilized to compute the significance of the estimated indicator weights (Chin, 1998). Bootstrapping technique is used for the monitoring of the significance of the weights of indicators (Efron & Tibshirani, 1993). The choice of this statistical tool is drawn from the non-normally distributes nature of PLS-SEM method. This procedure is carried out to confirm that the outer weights are not equal to zero (Hair et al., 2010). What is more, in order to consider an indicator as adequate to the formulation of the formative index, a minimum value of 0.05 should be obtained. PLS-SEM method has proven its robustness and resistance to the severe alteration in the case of the cancellation of a particular indication. Therefore, PLS-SEM provides much flexibility for the retainment of the insignificant indicators in its measurement model. Meanwhile, since the removal of a particular indicator signifies the disregard of an integral segment of the construct, the omission decision of formative indicators should not be the rule. One way out of such intricacies may lie in preserving both the strongly and weakly substantiated formative indicators as long as they are theoretically vindicated and conceptually constructed to fit into the research. The goal of bootstrapping analysis is to affirm that the indicator appertaining to the formative index provides a genuine contribution to the construct. It is noteworthy mentioning that bootstrapping can be deployed in other assessments of the PLS-SEM model, such as mediation and structural path coefficient tests.

7 Second Assessment: Weighing the structural (inner) models:

In pursuit of PLS-SEM implementation in this study, the ensuing course of action entails the assessment of the inner model. On that account, the structural paradigm has been put to the test instantly after the establishment of the reliability and validity of the measurement index. This second phase seeks to depict the linear regression effects that the endogenous constructs bear upon each other (Hair et al., 1998). What is more, the empirical analysis has been carried through in view of verifying the model's explanatory soundness. The evaluation of the path associated with the suggested structural model has been undertaken. To this end, the overruling relationships between exogenous and endogenous variables have been examined. Meanwhile, the assessment of the significance of the inner model's indicators has been carried out by the bootstrapping procedure. Furthermore, the hypothesis-testing process, along with mediation analysis, receive equal attention in the structural inspection of the model to bring forth well-substantiated answers to the proposed research questions. Therefore, the cross-examination of the proposed research hypotheses has been carried out through crosschecking P-values as well

as Confidence Intervals approaches. In the meantime, the mediation model has been assessed by means of bootstrapping routine. This study's causal structure has been assayed through administering the PLS-SEM inner model's package that involves four statistical formulae. Accordingly, PLS-SEM tradition invokes the initiation of the following major criteria to probe into the structural model: Significance of the Path Coefficients, Coefficients of Determination R^2 , Predictive Relevance Q^2 , and Effect Sizes F^2 (Hair et al., 2013; 2017).

7.1 Significance of the Path Coefficients:

The path coefficients are estimates of the relationships that have been postulated to combine different constructs. The execution of the Bootstrapping procedure takes place in the same way that has been carried out in the formative evaluation (in the outer model) to ascertain that formative indicators display adequate contributions to the fitting construct. Bootstrapping serves to assess the regression coefficients among the substantiated latent variables (Efron & Tibshirain, 1993). It is also applied to compute the standard errors to account for the coefficient's significance. PLS makes use of bootstrapping to come up with T-statistics for the sake of evaluating the inner path significance. Bootstrap standard errors generate approximate T-values that help to assess the significance of the inner model. What is more, the empirical calculation of the *T values* and *P values* for the entire structural path coefficients is feasible through the bootstrap-standard error (Hair et al., 2017). A substantial number (e.g.5000) of pre-established bootstrap samples are generated by means of bootstrapping.

7.2 Hypothesis Testing:

The next imperative development in this study entails putting to test the theoretical assumptions through bootstrapping analysis. This statistical routine (comprising 5000 random resample) is administered by running the method of bootstrapping simulation supported by SmartPLS software (Rahman & Nagapan, 2015). Using the SEM procedure as the basis of hypothesis testing ensures the investigation of the structural theory related to the studied phenomenon (Byrne, 2013). Therefore, the cross-examination of the proposed research hypotheses has been carried out through crosschecking P-values as well as Confidence Intervals approaches. Accordingly, Kock (2014) holds that the calculation of *P values* for the sake of hypothesis testing is a prevalent practice in PLS-SEM. He argues that *P values* computations calculate basically on errors drawn from bootstrapping. Indeed, *P values* estimation for hypothesis testing has been established as an essential procedure in dealing with path models.

Therefore, the *P*-value for each path coefficient should be estimated for the sake of assessing the hypotheses within the PLS-SEM framework (Kock, 2015).

Nevertheless, Wood (2005) is somewhat reluctant to employ *P* values and prefers calculating confidence intervals due to their interpretational accuracy and accurate reporting of the effect size. Efron & Tib-shirani (1993) emphasize the importance of bootstrapping confidence intervals. What is more, accounts based on confidence intervals bring forth more insights regarding the parameter estimates (Henseler et al., 2009). Similarly, Gardner & Altman (1986) contend that confidence intervals are more efficient than *P* values to assess the role of chance (a random variation). They recommend the analysis of CIs in all papers published in the British Medical Journal (and other journals) as they are more informative than *P* values. In the same vein, Greenland et al., (2016) regard highly the growing requirement of confidence intervals on the part of international journals. They maintain that the exclusive and heavy account of the null hypothesis of no effect obscures the tight connection between *P* values and confidence intervals, which results in underrated outcomes.

In the meantime, Cock (2015) advocates the implementation of the two techniques to affirm or disprove hypotheses in a PLS-SEM context as both generate close outcomes, and therefore, each consolidates the results of the other. He reaches the conclusion that a one-tailed *P*-value of 0.05 level has roughly an identical effect with regard to avoiding false positives when undertaking tests of 95 % confidence intervals. Likewise, Whitley & Ball (2002) hold that for the achievement of meaningful interpretations of the outcomes, both *P* values and confidence intervals should be accounted for. They argue that while *P* values ensure the quantification of the strength of a given association, confidence intervals estimate the size of effects. Besides, the theoretical frameworks and statistical computations underlying *P* values and confidence intervals are similar (Davies & Crombies, 2009).

Building on the above discussion, the current research draws its hypothesis testing procedure from the embracement of PLS-SEM method of *P*-value to validate or invalidate the hypotheses.

The *P*-value approach to hypothesis testing: In this study, the *P*-value approach embarks on probing into the research data relative to the null hypothesis in view of accounting for the statistical significance. Therefore, *P*-value results and interpretations are grounded on the assumption of being statistically significant or non-significant. In this respect, the validation or invalidation of the hypotheses depends on the cut-off 0.05. This conventional significance level has been established in order to arrive at conclusions vis-à-vis the null hypothesis and the alternative hypothesis. This approach aligns with the description that depicts the *P* value as an

“assessment of whether or not the findings are ‘significantly different’ or ‘not significantly different’ from some reference value (in trials, this is usually the value reflecting ‘no effect’)” (Davies & Crombies, 2009, p. 3). The *P*-value test calculates the likelihood of the occurrence of a given difference by chance. Thus, hypothesis testing (using *P*-value) seeks to investigate the ensuing question: how likely can the observed difference be deemed real in case the null hypothesis has been proved right? Otherwise stated, (as ‘*p*’ stands for probability) it gauges the prospect that a distinct difference is genuine or is developed by chance (no actual difference). Whitley & Ball (2002) support this line of reasoning concerning the role of hypothesis testing when they confirm that it “explores how likely it is that observed difference would be seen by chance alone if the null hypothesis were true” (p.1, 2002). Thus, the appraisal of the research hypothesis ponders mainly on the assessment of the null hypothesis H_0 , or the hypothesis of no difference.

To proceed with the *P* value statistics, the underlying assumption entailing no true difference is initially elaborated. Thus, to form the null hypothesis, there should be an explicit assumption of the lack of difference (no actual difference) between the treatments. That is, the effect size ‘null’ value equals zero effect (Greenland et al., 2016). Therefore, the examined null hypothesis throughout this study posits the absence of any effect between the variables. Accordingly, this study’s zero difference hypothesis conjectures ‘the existence of no difference between the variables in regard to their effect.’ On that account, this research’s precise null hypotheses are elaborated as follows:

- Leadership style *has no effect* on organizational performance.
- Organizational Culture *has no effect* on organizational performance.
- Total Quality Management *has no effect* on organizational performance.
- Job Satisfaction and Organizational Commitment *bear no mediating effect* on the relationship between leadership style, organizational culture, total quality management, and organizational performance.

The rejection of the null hypotheses entails the automatic acceptance of the alternative ones. However, in case the null hypotheses are proved to be accurate, subsequent calculations of the likelihood that this perceived difference is seen merely by chance should be made. Hence, the obtained *P* values help to determine if the observed effect is probably the result of chance. On the other hand, underlying presumptions of the existence of effects between variables are fundamental to the construction of the alternative hypotheses. These can be formulated either by two-tailed hypotheses or by one-tailed hypotheses building on the path’s direction as well as the sign of the related coefficient (Kock, 2015). Correspondingly, the two-tailed hypotheses

can be designed to probe into the existence of *any effect* between variables; whereas, the one-tailed hypotheses provide accounts of the *positive or negative* nature of these effects. To that end, the alternative hypotheses have been developed following the one-tailed approach:

Table 14: One-tailed Hypotheses

One-tailed Hypotheses	
Positive/favorable Effects On Organizational Performance	Negative/unfavorable Effects On Organizational Performance
➤ Transformational Leadership ➤ Effectiveness	➤ Non-Transactional Leadership ➤ Transactional Leadership
➤ Clan Culture ➤ Adhocracy Culture ➤ Market Culture	➤ Hierarchical Culture
➤ Academic Applications ➤ Administrative Application	➤ Financial Application

This research follows suit of the one-tailed tradition in designing and formulating the hypotheses. Meanwhile, implicit instances of the two-tailed hypotheses can be formed to provide illuminating insights regarding the meaningful effects that underlie this study.

Table 15: Two-tailed Hypotheses

Two-tailed Hypotheses
➤ Leadership style <i>has an effect</i> on organizational performance. ➤ Organizational Culture <i>has an effect</i> on organizational performance. ➤ Total Quality Management <i>has an effect</i> on organizational performance. ➤ Job Satisfaction and Organizational Commitment <i>exert mediating effects</i> on the relationship between leadership style, total quality management, and organizational performance.

To determine the statistical significance, *P* values are partitioned into three outcomes: (a) $p < 0.05$; (b) $p > 0.05$; and (c) $p = \text{NS}$ (Kock, 2014). When the *P*-value achieves beneath the significance limit (0.05), the null hypothesis is immediately disproved. This result highlights that the alternative hypothesis accomplishes the statistical significance (i.e., it has not been generated because of chance). In this case, the counter-argument (the alternative hypothesis) is

consequently validated (confirming the established effect between variables). Nevertheless, interpreting *P*-values is never a hassle-free task. It requires much more than a simple division of significant and non-significant value judgments to vindicate or discard a hypothesis. The intricacy lies in the inference that even substantial *P* values do not constantly signify the lack of association, in the same way, that tiny *p* values are not always determinant of weighty effect. On that account, the sound approach to follow is to introduce the exact *P* values along with effect size estimates.

7.3 Coefficients of Determination R^2 :

For the calculation of the model's predictive power, the coefficient of determination (R^2) has been computed as the initiatory measure to estimate the proportion of the variance among the endogenous constructs as explained by the entire set of the exogenous constructs connected with it (Hair et al., 2013). Otherwise stated, it serves to weigh the latent variable's explained variance about its total variance. Thus, the cumulative impact of the full range of the exogenous latent variables on the endogenous latent variables is figured by this coefficient. The squared correlation of the genuine (actual value) and predicted values are embodied in the R^2 value. Meanwhile, Chin (1998), who specifies that 0.67 denotes a considerable value, has identified three units of measurement; 0.33 signifies a moderate rate; 0.19 refers to the insubstantial and weakly scoring value.

7.4 Predictive Relevance Q^2 :

Q-Squared (Q^2) is a non-parametric measure (Henseler et al., 2009), which is used to estimate the predictive relevance of the structural model (Tenenhaus et al., 2005). This criterion takes for granted the model's capacity to predict the indicators related to the endogenous latent variables. The Blindfolding procedures are carried through to weigh the Stone-Geisser's Q^2 statistic (Stone, 1974). Blindfolding enables the achievement of the cross-validation redundancy that fits perfectly into PLS path modelling (Wold, 1982). Therefore, for the cross-validation of the model's relevance, the Blindfolding routine should be undertaken for each endogenous construct (Hair et al., 2017). This operation enables the handling of all the endogenous variables and the generation of cross-redundancy Q^2 value. This is carried out through an iterative treatment of the data in view of making designated omissions and systematic re-estimation of the model. For this arithmetic, the endogenous latent variable (the criterion) is harnessed for the computation of the predictive relevance of each latent variable in the model (Kock, 2013). For the appraisal and recognition of the adequacy of the model's

predictive relevance, the value 0 forms the barometer around which the Q^2 validation or invalidation is resolved. Therefore, in case the Q^2 value exceeds zero for a particular endogenous latent variable, the fitting variable display predictive relevance. However, the Q^2 values that are equivalent to or beneath zero demonstrate a lack of predictive relevance (Kock, 2013). What is more, a vital estimate relative to the quantification of the Q^2 value is the q^2 effect size. This indicant calculates for the relative impact of the predictive relevance according to a scale of measurement that assigns one of the following values to the endogenous latent variables: 0.02 (small), 0.15 (medium), and 0.35 (large) predictive relevance scores.

7.5 Effect Sizes f^2 :

The effect size f^2 is an essential measure for the validation of the quantitative outcomes of this study. Its significance becomes more evident when taking the measure of the magnitude of the relationships between latent variables. Thus, it reveals the links that associate the independent and dependent variables (Cohen, 1992). More particularly, it estimates the extent to which an individual exogenous (independent) latent variable contributes to the R^2 value for a particular endogenous (dependent) latent variable. The effect size f^2 is estimated as the R^2 cumulation associated with the percentage of the variance of the endogenous variable, which is not accounted for. Kock (2013) maintains that the elucidation of the effect sizes as the full values of the discrete contributions of the correlative predictor latent variables to the R^2 coefficients of the criterion latent variable appertains to every single latent variable's block. f^2 is an estimation of how the removed construct influences the endogenous construct. This evaluation takes place through the exploitation of the alteration that affects the R^2 value after the omission of a given construct from the model (Hair et al., 2017). Differently put, f^2 elucidates the change (variation) in R^2 as it occurs after the deletion of a designated exogenous variable from the model. Hair et al., (2013) suggest a statistical formula for the accurate assessment of the effect size f^2 . The ensuing equation represents the demonstration of the endogenous variables R^2 through R^2_{included} and R^2_{excluded} : $f^2 = (R^2_{\text{included}} - R^2_{\text{excluded}}) / (1 - R^2_{\text{included}})$. This embodiment is made explicit after the inclusion or exclusion of a particular exogenous variable (Hair et al., 2013).

7.6 Mediation Analysis:

As thoroughly theorized on in the theoretical and conceptual frameworks, it is insufficient to come up with a robust model with mere highlight and authentication of the direct inner path. Alternatively, the total effect entailing both the direct and indirect effects should be assessed.

This mediation account provides further methodological adequacy and solidity to this research. To this end, the inquisition of the intervening variables' underlying relationships along with the hypothesized causal interrelationships between the exogenous and endogenous variables falls within the Bootstrapping technique's scope of analysis. The bootstrapping technique implementation on the complete model yields path coefficients along with their significance level. Accordingly, the inclusion of two latent mediating variables (job satisfaction and organizational commitment) leads to the examination of the total effect of two exogenous variables (leadership style and total quality management) on the endogenous latent variable (organizational performance). This has been undertaken in line with the view that Helm et al., (2009) advocate concerning the cruciality to analyze the direct and indirect relationships underlying the variables which precede the endogenous latent variables. The PLS-SEM course of action starts with assessing the hypothesized path model, which represents the direct effects followed by the indirect (mediating) effects of the model. As a matter of fact, it would make sense to corroborate the significance of the straightforward impact that the exogenous variables exert on the endogenous variables before incorporating any mediator's analysis by means of Bootstrapping. The Bootstrapping tool has been ratified as the most consistent approach to treat mediation owing to its resilience in terms of the sampling distribution, which does not restrain the PLS-SEM statistics. Wong (2013) underscores the efficacy of bootstrapping in assessing the statistical significance of the mediating role. The T-statistics of the bootstrapping procedure (Mean, T values, STDEV) are computed to provide the weightiness of the total effect. In this respect, Hair et al., (2014) provide two ways to account for the path coefficient for the mediating effects: $(\beta) = \beta_{XM} * \beta_{MY}$. Besides, the following formula that is applied has more bearings on this study as it estimates the t-value when two mediators ME_1 and ME_2 relate to the same independent variable and dependent variable:

$$T = \frac{\beta_{XM} * \beta_{MY}}{STDEV(\beta_{XM} * \beta_{MY})}$$

Meanwhile, Hair et al., (2013) recommend the implementation and valuation

of three levels of mediation analysis. The measurement scale ranges from the utter absence of mediation ($0 < VAF < 0.20$) through the partial mediation ($0.20 < VAF < 0.80$) to the complete or full mediation ($VAF > 0.80$). A substantial total effect paves the way for the authentication of the path model relationships, even in the case where the incorporation of the indirect ones undermines the direct paths. In the course of appraising the non-direct and total effects relationships in this study, the bootstrap estimates elicited from the direct account are harnessed to construct confidence intervals.

The Confidence Interval approach to mediation hypothesis testing: This study has deemed it extremely important to report confidence intervals along with *P* values. Both analyses help to develop complementary knowledge regarding the statistical significance of parameters. Still, the recent predilection for confidence intervals (ICs) has been drawn mainly from their extensive account of the effect size, which is the estimation of the size of the difference between the two given groups. Thus, the importance of effects is meticulously measured by the effect size rather than the mere presence or not of statistical significance. On that account, ICs specify the direction of the impact under scrutiny and allow for the inference of statistical significance. Confidence intervals' key strength lies in identifying the range of the potential effect sizes consistent with the data. This is in keeping with the definition of the confidence interval as "a range of values for a variable of interest constructed so that this range has a specified probability of including the true value of the variable. The specified probability is called the confidence level, and the endpoints of the confidence interval are called the confidence limits" (Davies & Crombies .p, 4 2009). Clearly, the variable of interest in this study entails the treatment effect. Correspondingly, the calculation of the confidence interval specifies the range of value that confines the true treatment effect. It accounts for the probability of restricting the true value within the desired range. A confidence interval is categorized under the inferential labelling of methods. It is obtained via the calculation of a sample and yields a range of values that probably entails the unknown estimate of the population parameter. Otherwise stated, the confidence interval lays down the value range that contributes to the informed speculation of the size of the genuine treatment effect whose plausibility has been validated as reported by the actual size of the difference. It can also be regarded as a development from the estimation of a single value to the calculation of a range of values that demonstrate their soundness to the research population. Instances of the statistical methods employed to estimate the desired value range are the sample mean, the odds ratio, the difference between two means, etc. Nevertheless, these points' estimates give only a rough measurement of the true value. Confidence intervals, on the other hand, provide precise depictions of these estimates.

This study does not diverge from the conventional confidence interval of 95%, which is heavily advocated in the literature and extensively implemented throughout empirical studies. Meanwhile, researchers can create the CI that fit their research objectives. The most prevalent intervals are 90%, 95%, or 99%. The chosen level of confidence affects the confidence interval size noticeably. For instance, any CI above 95% constitutes a larger (more expanded) interval with a bigger probability to account for the true value. 95% is analogous to the threshold 0.05

applied in *P*-value. Confidence intervals 95% can provide similar (or even more precise) inference of the statistical significance to the cut-off 0.05 applied in *P*-value.

To proceed with the 95% confidence intervals, they are estimated to account for their upper and lower bounds. Thus, in the case where the value zero belongs to the specific parameters of the interval, the hypothesis is disproved. However, when the value zero does not fit within the given range (falls outside) of the interval the hypothesis is vindicated. In plain English, the lack of statistical significance is proven when the value 0 is within 95%; whereas, the statistical significance is substantiated when the value 0 is beyond 95%.

Additional insight from estimating CIs lies in the information regarding the width of the confidence intervals. In this regard, a chain of influence entails the sample size, the size of standard error, and the width of the confidence interval, respectively. Accordingly, in the case where the sample size is more extensive (quite large), the confidence interval is then characterized as narrow. In contrast, when the sample size is insubstantial (quite small), the confidence interval is then featured as far-ranging (quite broad). In the first case, where confidence intervals are narrow, the research provides precise accuracy of the true effect estimation. On the contrary, in the second case, where confidence intervals are more significance, the outcomes reveal the patent imprecision of estimating any effect size. Shaffer (1995) maintains that the power of the process is prone to assessment through the width of the interval in case the hypothesis is not discarded. In the meantime, prior to interpreting confidence intervals, the evaluation of bias is a necessary step. It ensures that large and narrow confidence intervals are the outcome of unbiased studies. In this regard, Hair et al., (2016) advocate the deployment of bias-corrected and accelerated bootstrapping methods to figure out confidence intervals due to its stable nature that yields comparatively narrow CIs. Therefore, they argue that the bias-corrected can adapt for bias as well as skewness detected during the distribution of bootstrap estimates.

7.7 Synopsis of Research Hypotheses, Research Variables, and Research Instruments:

Table 16: Synopsis of Research Hypotheses, Research Variables, and Research Instruments

Variable	Research Instruments	Operationalizing Dimensions	Research Hypotheses
Organizational Culture	OCAI (Cameron & Quinn, 1999, 2006)	- Clan culture - Adhocracy culture - Market culture - Hierarchy culture	- A Clan culture type in Moroccan universities will exert a positive effect on organizational performance. - An Adhocracy culture type in Moroccan universities will exert a positive effect on organizational performance. - A Market culture type in Moroccan universities will exert a positive effect on organizational performance. - A Hierarchy culture type in Moroccan universities will exert a negative effect on organizational performance.
Leadership Style	MLQ 5X (Bass & Avolio, 1995, 2004)	- Transformational Leadership - Transactional Leadership - Laissez-faire Leadership - Effectiveness	- The transformational practice will lead to a positive perception of leadership style, which affects employees' performance favorably. - The transactional practice will lead to a negative perception of leadership style, Which affects employees' performance unfavorably. Non-Transactional leadership (laissez-faire) practice will lead to a negative perception of leadership style, which affects employees' performance unfavorably. Effectiveness will lead to a positive perception of leadership style, which affects employees' performance favorably. - The adoption of adequate leadership style will lead to higher job satisfaction among employees. - The adoption of adequate leadership style will lead to higher commitment of the employees to their organization.
Total Quality Management	TQM The National Charter of Education (1999) & Statute 01-00 (2000).	- Financial Applications - Academic Applications - Administrative Applications	Financial applications will have a negative effect on Total quality management implementation in Moroccan higher education. Academic applications will have a positive effect on Total quality management implementation in Moroccan higher education. Administrative applications will have a positive effect on Total quality management implementation in Moroccan higher education. - The implementation of Total quality management will lead to higher job satisfaction among employees. - The implementation of Total quality management will lead to higher commitment of the employees to their organization. Job Satisfaction affects organizational performance Organizational Commitment affects organizational performance.
Mediation	Multiple Mediation Model Testing SmartPLS 3 Bootstrapping (Preacher & Hayes, 2008)	- Job satisfaction as a mediator. - Organizational commitment as a mediator.	Job satisfaction <i>mediates</i> the relation between leadership style and organizational performance Organizational commitment <i>mediates</i> the relation between leadership style and organizational performance. Job satisfaction <i>mediates</i> the relation between total quality management and organizational performance Organizational commitment <i>mediates</i> the relation between total quality management and organizational performance.

8 Qualitative Data Analysis :

During the cross-sectional mixed-methods application, data analysis, and findings interpretations are established as focal processes for the integration of quantitative and qualitative approaches (Fetters et al., 2013). On that account, for the retrieval of the study's research explanatory sequential design, the outcomes generated from the survey questionnaires have been harnessed to form the survey interviews' research questions. That is, the qualitative phase has been drawn from the retrieved outcomes of the quantitative one (See the section of the explanatory sequential design on pages 194/196). Therefore, to proceed with the examination of the qualitatively collated output, the data from the semi-structured interviews have been subject to methodic cross-thematic analysis following the abductive reasoning. In this vein, though the qualitative data has been elicited inductively from the quantitative results, the process of the thematic analysis is entirely an abduction pattern, thus alternating between deductive and inductive techniques all across the six steps underlying the thematic inspection. This has been in line with the abductive model (Pierce 1934-1960) that has been supported and put into use across this study (See the section of the research approach on page 197). Meanwhile, the conduct of a series of semi-structured interviews (starting with the pilot studies) has brought to focus the nature of the proposed research questions. The range of the research questions is very determinant of the nature of the obtained output. For this, open-ended questions have been developed for the semi-structured interrogations and have been made consistent with the respondents' administrative / leadership hierarchies and positions. In this respect, Braun & Clarke (2006) draw a distinction between inductively designed questions (bottom-up) and deductively formed questions (top-down). Correspondingly, and as has been made explicit earlier, the inductive research questions have been drawn from the retrieved quantitative obtained findings. The ultimate integration phase takes place at the triangulation of the qualitative dataset on the quantitative data corpus for the exhaustive collection of the mixed data.

9 Initiation to Thematic Analysis for Qualitative Data Analysis:

Braun & Clarke's (2006) outstandingly clear analytical pattern has constituted the blueprint for this study's qualitative data processing and assessment. The soundness of this approach is drawn from these scholars' affirmation that it has the same leverage as other comparable techniques such as phenomenology, ethnography, content analysis, and grounded theory. From this perspective, this dissertation's substantive evaluation has been brought into

use to probe into the effects exerted by a set of factors, namely leadership style, organizational culture, and quality management, on the organizational performance regarding the Moroccan public universities. To this end, top executives and administrators of three public universities have been conversed by way of semi-structured interviews. The yielded results have been investigated and assessed by dint of the thematic analysis. The broad descriptions of this inquisitive mechanism usually come in the form of a series of actions or practices undertaken to treat the set of data. Thus, Miles & Huberman (1984) put forward three primary levels of data analysis: the preparatory stage through transcribing the data, the synthesis of data into themes by means of coding, and the disclosure of data. Boyatzis (1998) depicts it as the procedure entailing the discernment, dissection, and pinpointing of the themes. Bazely (2009) identifies it with the systematic formulation of significant themes and determines three practices: description, comparison, and association of data. Attride-Stirling (2001) considers that the most effective tool to schematize meaningful patterns and establish their associations with the full range of data is to project them in maps that shed light on their thematic examination. Miles & Huberman (1994) regard thematic analysis as a method for the processing and exposure of a wide-ranging similar and divergent data through their assortment into themes. Accordingly, they propose a scheme for the execution of their thematic analysis. It comprises a three-step course of action: reduction of data, disclosure of data, and drawing and checking inferences. Braun & Clarke (2006) hold that it is a method that determines, analyzes, categorizes, depicts, and provides an account of the themes that have been singled out from a specific dataset. These descriptions pave the way for a detailed featuring of the different steps that embody the analytical inspection of data. Meanwhile, for the enactment of Braun & Clarke's (2006) thematic framework, a rigorous action plan entailing six fundamental implements has been carried out. This well-structured approach comprises: (1) Familiarization with the newly collated output; (2) Inceptive generation of codes (codification of the aggregate data); (3) Themes detection process; (4) Themes reconsideration; (5) Themes delineation; and (6) Data reporting (synthesis of the findings). This scheme has been perfectly tailored to meet the expectations of the current study's qualitative component on the grounds of its pertinence and ability to generate rich insights that address specific research questions (Braun & Clarke, 2006).

First Implement: Familiarization with the newly collated output. To have a sound grasp and profound absorption of the entire volume of data, repeated listening of audio recordings as well as intensive recurring reading through transcripts should be undertaken.

Surveying verbatim records to detect any form of inaccuracies, erroneous statements, or in-error language is a necessary action during this inaugural phase. While scanning through the scattered information, the investigator should focus on the semantic patterns. For the analyst to be proactively engaged in breaking down data from the corpus and seek out patterns of meaning, he should be conversant with the set of data that involves the integral interviews ahead of any advanced processing of data. Furthermore, taking notes and forming notions regarding codes could be initiated at this first level of information assimilation (Lincoln & Guba, 1985). Putting down notes can facilitate the task of the subsequent actions. These highlights can establish elementary links between the interviewee's disclosures and the rest of the accumulated data. In all, the purpose of this initiatory level is to be extremely knowledgeable of the data to guarantee accurate and comprehensive accomplishment of the forthcoming processes.

Second Implement: Inceptive generation of codes. The coding process has been instituted immediately after the full assimilation of the data corpus and based on the preliminary concepts of codes that have been anticipated during note-taking. This operation entitles the concentration of data into particular researched features (Morse & Richard, 2002). What is more, it contributes to the smooth analysis of qualitative data in order to dissect patterns and figure out the associations among different datasets (Miles & Huberman, 1994). In this study, a hybrid method has been put into use to convert large segments of data extracts into codes. Gibbs (2013) maintains that coding can be processed either through software (e.g., NVivo, ATLAS, etc.), or performed through manual manipulation. Therefore, both manual and computerized mechanisms have been put into exercise for data coding. Fusing both techniques allows not only the software's instantaneous taxonomy of input into themes but also the human's verification of the integrity and exhaustiveness of data. NVivo software has been deployed since it can make the task of coding easier and can handle complex coding of substantial material. On that account, the inputting of the audio recordings into NVivo concerns the full range of answers of the interviews to proceed with the fastidious codification. The coding process has been performed in accordance with the research questions. In this regard, only the significant and relevant segments of text are coded; otherwise, it is not encrypted as it is deemed irrelevant. The implemented method of coding across this qualitative study is open-ended coding, which requires no pre-existing set of codes to apply to the assembled data. Hence, the data evolves and transforms throughout coding. Furthermore, two classes of coding can be chosen from a 'data-driven' or 'theory-driven.' For this particular qualitative research, it is derived from data itself. Subsequent to the codification of data extracts, the sets with identical code should be put

together (Braun & Clarke, 2006). This last manipulation of codes sets the stage for the next handling of themes.

Third Implement: Themes detection process. For the third phase, the analyst undertakes a delicate inquisition to uncover significant themes. Thus, after intensified and repeated reading through the coded data on NVivo, there should be detailed reexamination and arrangement of the differing codes before embarking on cataloguing them according to their relevant patterns of meaning. These constitute preliminary information for the development of themes. The major issue to address is to determine what to codify as the overarching theme, sub-theme, or miscellaneous theme. This meticulous partition requires a high degree of precision and an active engagement on the part of the researcher. The assortment of codes into larger segments or themes is assumed to provide illuminating insights regarding particular research questions. In case unfitting data was accumulated, it would be more consistent to come up with a miscellaneous theme to host them provisionally. The largest part of the data should appertain to a single theme. Yet, some exceptions can be spotted where some codes fall within two or more themes. To overcome this intricacy, the heterogeneous theme could be developed. To avoid any kind of overlap between the preceding coding level and the ongoing theme identification, it is more appropriate to work on a relatively substantial amount of data. Meanwhile, in order to figure out the central theme from this data, there should be an allocation of a clear narrative to the variety of data to comprehend the respondent's line of reasoning (Crawford et al., 2008). In the meantime, the major standard for the segmentation of themes is the traceability of a given theme, at least in two different instances or interviews. This is in line with Braun & Clarke (2006), who argue that the resilience nature of thematic analysis lies in the identification of themes and the frequency of the occurrence in different approaches. Thus, a recurrent theme can be established as a significant theme. Additionally, Boyatzis (1998) holds that there exist two ways to produce themes: the inductive approach, which draws directly from the raw (a data-controlled approach), or the deductive process that builds them using theories. For the context of this research, the inductive method is adopted to generate themes. This study approaches the initial forming of themes from the informative and descriptive contributions of each one to the associated research question. That is, it seeks to depict instances of data that have a bearing on the target research question. The drafted themes necessitate further review and reformulation for their ratification. This task is carried out during the quest for a deeper refinement of themes in the forthcoming implement.

Fourth Implement: Themes reconsideration. For the ultimate authentication of the performed patterns of meaning, the fourth practice should engage in the reinvestigation and redetermination of the themes. This complies with Braun & Clarke (2006), who recommend the conduct of rigorous adjustment and reassessment of the topics for the precise embodiment of the data set by different categories of themes. Thus, this refinement would most probably lead to redrafting and reformulating the full range of overriding themes and sub-themes. This process includes additional verification of the coded data relative to each theme for the evaluation of their coherence. This is in keeping with Braun & Clarke's (2006) characterization of an excellent thematic projection of data as having coherent and meaningful themes. This requires obvious and unequivocal discrepancy between themes. What is more, many rectifying measures should be made. Furthermore, other themes that appertain to identical semantic categories can be merged for the sake of succinctness and pertinence (Braun & Clarke, 2006). The alignment of data with the fitting theme should be undertaken cautiously to avoid overloading different themes with inconsistent information or with overlapped input. The large body of data should be reduced into manipulable and easy to merge data that reflects the themes compactly. The thematic map to depict the associations among themes can appropriately project this. Meanwhile, concerning the required number of themes for the conduct of a decent analysis, Braun & Clarke (2012) provide an estimation in their APA section. They hold that "if you report more than six or seven themes in a 10,000-word report...your themes will likely be 'thin'..." (p, 65). Accordingly, this study intends to involve five or six themes, as the objective is to obtain meaningful and distinct themes that convey the bottom line about the data.

Fifth Implement: Themes delineation. The preceding purification process conveys to the delineation and identification of each theme with the fitting name. Thus, the designation of convenient labels to different themes should be based on the features they capture. They should reflect the themes' content and communicate catchy and brief information to the reader. Meanwhile, it is equally essential to discern potential subtitles and explain how they connect with the overarching themes. The association between all themes should be well defined and established by an illustrative thematic mapping. This facilitates the analysis of the extent and the way each theme fits into the full range of data and the research questions (Braun & Clarke, 2006). Indeed, in this end-stage of the thematic analysis application, the confirmation of the themes' inclusivity and coverage of the research questions is a crucial action to perform. The labelling process should be carefully initiated to ensure that the assigned names provide big pictures of similar themes.

Sixth Implement: Data reporting and synthesizing. The five above-described implements lead eventually to the final synthesis of the dissertation's qualitative findings. This takes the form of a write-up. This stage wraps up the thematic analysis approach on the report of Braun & Clarke (2006), who recommend a written description to synopsise qualitative outcomes of a similar kind as this dissertation. The write-up should display a coherent structure and should not be exorbitantly long. The set of themes should be summed up in a logical sequence of examination while shunning recurring and inessential accounts. Meanwhile, the only warranty for the precision and trustworthiness of the planned series of steps is the systematic execution of the comprehensive package embodied in Braun & Clarke's (2006) thematic analysis method.

This study has settled upon the thematic analysis approach to process, dissect, and elucidate the qualitatively drawn data. This analytical alternative has been accorded priority with an emphasis on the procedural requirements and interpretative cues of the respondents' responses. Meanwhile, the analyst is fully aware that there is no silver bullet that paves the way for the straightforward application of Braun & Clarke's (2006) paradigm. Expertise has been gained earlier, throughout, and after the process. It is worth mentioning that thematic analysis has been adapted to suit the specificities of this study. A major manifestation of this alignment emerges in the scheming of the sequence with which the raw data could be treated. Thus, the researcher has been reciprocating throughout the procedures alternating back and forth all across the six levels. This is in line with the predefined research approach that theorizes on and advocates the adoption of the abductive pattern of analysis throughout this study (see the section of the research approach on page..). The thematic analysis may sound like a sequentially built approach, yet recursive and rebuilt patterns throughout its applying depict it as a non-sequential method of data analysis. The resilient nature of thematic analysis assents to the deployment of both inductive and deductive methods (Hayes, 1997). These iterative features characterize the authenticity and adaptability of this approach. Concerning the required amount of data for the appropriate initiation of this method, Joffe & Yardley (2004) recommend the availability of a substantial content of the input. This would assure the comprehensiveness and insightfulness of the research.

10 Triangulation mixed-method approach :

During this thesis' data analysis, the compound findings from the qualitative and quantitative frameworks have been treated as an integral research data corpus. This propounds

a holistic approach that can be introduced and applied to provide evidence of the trustworthiness and authenticity of the heterogeneous outcomes. To this end, the triangulation mixed-method approach has been brought into play to reap the benefits of both approaches (Jick, 1979). It fosters the validity and reliability of data and outcomes. In this vein, Denzin (1989) put forth four strands of triangulation: (1) Methodological triangulation; (2) Data triangulation; (3) Theoretical triangulation; and (4) Investigator triangulation. Clearly, the first and second aspects have been rigorously followed throughout this thesis. Thus, the adopted methodology has been built upon the triangulation of qualitative and qualitative approaches. The minimum of two methods to collate data are required for the embodiment of the methodological triangulation in research (Amerson, 2011). Regarding data triangulation, it is embodied in the multi-sourced data collection phase that takes place at different intervals and targets a large number of participants.

Triangulation enables the systematic inclusion and combination of qualitative and quantitative approaches at data collection, data analysis, and data discussion levels. It has therefore been apperceived as a methodic procedure that seeks to mix and form syntheses of both data and outcome assembled via varying instruments (Smaling, 1987). Meanwhile, what counts the most in this paper is the cross-checking of data from a diverse range of assessing measures. The plurality of sources boosts the credibility and integrity of the achieved outcomes (Stavros & Westberg, 2009). On that account, it is worth recalling that the current work follows the explanatory sequential design, which triangulates the qualitative output on the quantitative data. Thus, the dataset generated from the initial stage of the sequential design has been harnessed to form the research questions for the interviews. Having underscoring that, the questionnaire data are conducive to the semi-structured input shaping. It is worthy that; the elucidation of both types of data has been undertaken separately prior to any advance triangulation process. Tashakkori & Teddle (2003) affirm that triangulating qualitative and quantitative data can yield one of the following outcomes; convergence, divergence, or complementarity conclusions. In a similar vein, Greene et al., (1989) put forward five reasons for putting together qualitative and quantitative approaches: Triangulation, triangulating data (at the integration phase) enables the researcher to check the consistency of the outcomes of both approaches. The triangulation of a set of research outcomes with another would foster the validity of the inferences. Complementarity, the obtained outcomes generated from one method are further enhanced using another methodology. Development, the sequential design is operationalized to deploy results yield from one phase to inform about the progress of the methods for the subsequent use. Expansion, a variety of methods are utilized to broaden the

scope of a research study to cover all the inspected elements; and Initiation, inconsistent and contradictory data are detected, and replaced by adequate questions.

The ultimate integration phase occurs at the theoretical triangulation of the data corpus. It seeks a comprehensive description of the intermingled findings. Thus, the triangulation of theories is put into practice by explaining data through the instrumentality of various theoretical frameworks. With reference to the above discussion, the current study draws and triangulates the data from the four instruments OCAI, MLQ, TQM, and BSC to display their complementarity (rather than the convergence of data, i.e., outcomes revealing similar outcomes). It seeks to shed light on how the four instruments' outputs are combined to come up with joint elucidation of the exerted impacts on the studied public universities in terms of their organizational performance. This sets the stage for the holistic interpretation of the fused results and allows for the exhaustive explanation of the mixed findings. In this case, no prior assumption of convergence or consistency has been postulated. Heterogeneous and incompatible outcomes are approached in such a way that capitalizes on the variance and harnesses them to account for the shortcomings of each method. This would ensure the plausibility and credibility of both findings and interpretations (Lincoln & Guba, 1985).

11 Chapter Summary :

Substantive data processing and analysis have been proceeded following a two-phased process. The chapter's alienation has been patterned in keeping with the sequential explanatory mixed- method approach. In the meantime, to warranty the purification of the data from all forms of deficiency, rigorous data preparation and screening treatments have been set forth to account for Missing Values, Outliers, Data Distribution, and potential Suspicious Response Patterns (Hair et al., 2014). For the execution of the partial least square –structural equation modelling (PLS-SEM) method, the start-up phase has entailed the treatment of the quantitative evidence. Subsequently, the succeeding procedure has been performed using the thematic analysis for the analytical cross-examination of the qualitative outputs (Braun & Clark, 2006). For the operationalization of the second-generation multivariate PLS-SEM method, SmartPLS software has been administered. It consists of two underlying assessments. The inceptive measurement seeks to estimate the reliability and validity estimates, multi-collinearity, and the significance of weights. The ensuing evaluation computes Significance of Path Coefficients, Coefficients of Determination R^2 , Predictive Relevance Q^2 , and Effect Sizes f^2 (Hair et al., 2017). For the testing of the research hypotheses, *P*-values and Confidence Interval techniques have been approached. Concerning the mediation model, the inclusion of two latent mediating

factors (job satisfaction and organizational commitment) has enabled the inspection of the total effect of four exogenous variables (leadership style, organizational culture, total quality management, and balanced scorecard) on the endogenous latent variable (organizational performance). The accumulated findings from the qualitative and quantitative instruments have been triangulated to vindicate the consistency or not of the hybrid outcomes and enhance the validity of the inferences.

Chapter Four: Data Analysis and Results

1 Quantitative Findings : PLS-SEM Measurement Model

1.1 Convergent Validity:

For the assessment of the convergent validity related to the scale items, two measures have been put to execution. These are Factor loadings (Hair et al., 2014) and the Average Variance Extracted (Fornell & Larcker, 1981).

1.1.1 Factor Loadings:

The factor loadings criterion has been utilized to weigh items proximity along with associated constructs. According to Hair et al., (2010), a rule of thumb applied to convergent validity analysis requires that the loadings of items should exceed 0.5. Bagozi & Yi (1988), who maintain that the factor loadings should attain the values between 0.6 and 0.9, have advanced further corroboration of the adequate convergent validity. Only then, a model can be vindicated as having an admissible convergent validity.

The examination of the factor loadings of the forty-nine indicators listed in the table 17 below reveals that forty-eight items exceed largely 0.50. The outcome from this measure manifests how robust is the path coefficient associating the formative constructs and reflective indicators in this study. Therefore, all path coefficients are deemed as strong as they score 0.70 and more (Hair et al., 2017). The values range from 0.80 to 0.99, which provides strong evidence of the robust convergent validity. In the meanwhile, one item (TQM_gov_auto_afct_pstvly_perf) fails to attain the required cut-off and scores 0.49. On that account, further analysis of the governance autonomy's corresponding dimensions bears out the adequacy of its convergent validity building on their AVE (> 0.5). Therefore, this indicator is kept since its removal does not entail any increase in the Average Variance Extracted or Composite Reliability to the extent of trespassing the recommended thresholds 0.5 and 0.7 (Hair et al., 2014). In all, this measure has established a strong correlation between every single construct and its equivalent reflective measure. All the indicators are deemed valid and adequate for the running and estimation of the latent variable research.

Table 16: Factor Loadings

Constructs	Items	Correlations
Transformational Leadership	Trnsf_idlzd_inflc_atrbt_gd_grp	0.916
	Trnsf_idlzd_inflc_atrbt_pwr_cfdnc	0.943
	Trnsf_idlzd_inflc_bhvr_clctv_sns_mssn	0.952
	Trnsf_idlzd_inflc_bhvr_strng_sns_prps	0.839
	Trnsf_indv_cnsdr_cnsdr_difr_ned	0.895
	Trnsf_intlct_stml_critc_assmpt_rexam	0.901
Transactional Leadership	Trnsctl_indv_cnsdr_dvlp_othr_strgth	0.897
	Trnsctl_mngmt_exptn_actv_fcs_trck_mstk	0.969
	Trnsctl_mngmt_exptn_psf_flr_intrf_prbl	0.941
	Trnsctl_mngmt_exptn_psf_inrtf_chrc_prbl	0.840
Laissez-faire Leadership	Nn_ldrshp_lssz_fr_dcisn_avdnc	0.976
	Nn_ldrshp_lssz_fr_invlvmt_avdnc	0.979
Effectiveness	Effctvss_led_grp_efctv	0.877
	Effctvss_metng_jb_ned	0.874
TQM Academic Autonomy	TQM_acdmc_auto_acdmc_yr	0.962
	TQM_acdmc_auto_std_sbmsn	0.939
	TQM_acdmc_auto_stf_rctrut	0.975
TQM Financial Autonomy	TQM_fincl_auto_mng_avbl_bdgts	0.914
	TQM_fincl_auto_affct_absnc_inffcnycy_accnt_bdy	0.966
	TQM_fincl_auto_mng_univ_shft_stat_ovrsght_gov	0.908
	TQM_fincl_auto_rcrut_mntrd_stat	0.958
	TQM_fincl_auto_undrtk_govng_brds	0.975
TQM Governance Autonomy	TQM_gov_auto_afct_pstvlly_perf	0.490
	TQM_gov_auto_slf_gov_mde	0.902
Job Satisfaction	Job_Stisf_wth_TQM_Outcomes	0.998
	Job_Stisf_wth_TQM_implm	0.998
Organizational Commitment	Org_Cimitmt_Ledr_implm_TQM	0.982
	Org_Comitmt_Extr_efrt_try_hdr	0.992
	Org_Comtmt_Extr_efrt_dg_mr-thn_expt	0.992
Organizational Performance	BSC_fincl_prspctv_adpt_slf_mngt	0.891
	BSC_fincl_prspctv_implt_anul_bgt	0.929
	BSC_fincl_prspctv_implt_extrl_fnd	0.914
	BSC_lrng_grwth_prspctv_hmn_cptl_slf_asesmnt	0.947
	BSC_lrng_grwth_prspctv_Info_cptl_imprvmnt	0.930
	BSC_lrng_grwth_prspctv_Info_cptl_trng_IS	0.942
	BSC_lrng_grwth_prspctv_hmn_cptl_dvlp_cmptc	0.967
	BSC_lrng_grwth_prspctv_hmn_cptl_rwrd	0.955
	BSC_lrng_grwth_prspctv_org_cptl_aprprt_envrmt	0.951
	BSC_lrng_grwth_prspctv_org_cptl_emptv_mtvtn	0.893
	BSC_lrng_grwth_prspctv_org_cptl_gols_missn	0.908
	BSC_lrng_grwth_prspctv_org_cptl_imprvmnt	0.925
	BSC_prc_prspctv_dy_t_dy_oprt_trng	0.907
	BSC_prc_prspctv_rglr_msrmnt	0.807
	BSC_prspctv_univ_custmr_prspctv	0.862
	BSC_prspctv_univ_fincl_prspctv	0.858
	BSC_prspctv_univ_lrng_grwth_prspctv	0.880
	BSC_std_stsf_giv_qulty_educ	0.963
	BSC_std_stsf_invlv_desic_mkg	0.957
	BSC_std_stsf_srvy_expt	0.951

1.1.2 Average Variance Extracted (AVE)

Table 17: Average Variance Extracted (AVE)

Construct	Average Variance Extracted (AVE)
academic autonomy	0.919
effectiveness	0.767
organizational commitment	0.978
financial autonomy	0.892
governance autonomy	0.527
laissez-faire	0.955
leadership style	0.583
organizational performance	0.842
job satisfaction	0.996
total quality management	0.690
transactional	0.834
transformational	0.825

The analysis of the AVEs exhibits that the minimum condition (0.5) needed so that the latent variable explains at least half of the variance of its indicator has mostly been achieved. Thus, ten constructs have received values ranging from 0.69 to 0.99, and the residual items are found to be > 0.50 . Therefore, convergent validity is corroborated.

1.2 Discriminant Validity:

Building on PLS-SEM, two tests are put in operation for the execution of discriminant validity: Fornell Larcker's criterion (AVE) and Cross-loadings. Fornell & Larcker (1981) recommend the comparison of the construct's variance extracted with the fitting inter-construct squared correlations. Chin (2010) holds that cross-loadings are the outcome of correlating each latent variable's component score with every single indicator. Regarding Fornell-Larcker's results, they specify that the correlations underlying the latent variables are lower than the square root of the average variance extracted. This entails a greater partition of variance with its attached indicators in comparison to its sharing with the rest of the latent variables (Fornell & Larcker, 1981). Therefore, measurement is conceived to be good as square roots of AVEs are superior to all bivariate correlations.

1.2.1 Fornell & Larcker:

Table 18: Fornell & Larcker

	ACAD AUTO	EFFECT	ORG COMIT	FIN AUTO	GOV AUTO	LAISSEZ	ORG PERF	JOB SATISF	TRANSCT	TRANSF
ACAD AUTONOMY	0.959									
EFFECTIVENESS	- 0.006	0.876								
ORG COMMITMENT	0.826	0.042	0.989							
FIN AUTONOMY	0.902	0.011	0.925	0.945						
GOV AUTONOMY	0.101	0.119	0.117	0.099	0.726					
LAISSEZ-FAIRE	- 0.043	- 0.033	- 0.087	- 0.061	- 0.080	0.977				
ORG PERFORMANCE	0.691	0.091	0.845	0.752	0.182	- 0.080	0.918			
SATISFACTION	0.612	0.097	0.744	0.659	0.184	- 0.089	0.964	0.998		
TRANS	0.022	0.902	0.052	0.039	0.124	- 0.053	0.102	0.113	0.913	
TRANSF	0.017	0.631	0.075	0.047	0.129	- 0.083	0.113	0.116	0.709	0.908

Thus, a higher value is scored for the square root of AVE for all factors than for the entire associations gathering those particular constructs and the residual constructs. In all, a higher value is assigned to the latent variable's AVE. The above outcomes suggest that the respondents can comprehend and establish a straightforward link between the instrument's questions and the latent variables, which yield appropriate responses.

For the estimation of the cross-loadings, the analysis has been carried out through the estimation of the cross-loadings of all items belonging to the constructs as well as the square root of Average Variance Extracted (AVE) weighed for every single construct. The results yield higher loadings of all the items on their matching construct than the cross-loadings on the remaining constructs as displayed in the table 20 below.

1.2.2 Cross Loadings:

Table 19: Cross Loadings

	ACAD AUTO	EFFECT	ORG COM	FIN AUTO	GOV AUTO	LAISSEZ - FAIRE	ORG PERF	SATIS F	TRANS	TRANSF
BSC_fincl_prspctv_adpt_slf_mngt	0.749	0.070	0.831	0.832	0.146	-0.089	0.891	0.792	0.072	0.088
BSC_fincl_prspctv_implt_anu l_bgt	0.717	0.104	0.869	0.781	0.168	-0.092	0.929	0.854	0.109	0.103
BSC_fincl_prspctv_implt_extr l_fnd	0.713	0.082	0.896	0.796	0.154	-0.089	0.914	0.829	0.088	0.103
BSC_lrng_grwth_ prspctv_hmn_cptl_slf_asesmnt	0.581	0.075	0.699	0.617	0.188	-0.068	0.947	0.821	0.089	0.100
BSC_lrng_grwth_prspctv_Info _cptl_imprvmnt	0.577	0.085	0.683	0.602	0.187	-0.064	0.930	0.825	0.090	0.099
BSC_lrng_grwth_prspctv_Info _cptl_trng_IS	0.583	0.091	0.691	0.610	0.186	-0.069	0.942	0.744	0.100	0.106
BSC_lrng_grwth_prspctv_hm n_cptl_dvlp_cmptc	0.616	0.101	0.748	0.663	0.184	-0.086	0.967	0.928	0.114	0.117
BSC_lrng_grwth_prspctv_hm n_cptl_rwrdr	0.592	0.078	0.715	0.631	0.182	-0.077	0.955	0.770	0.094	0.105
BSC_lrng_grwth_prspctv_org _cptl_aprprt_envrmt	0.600	0.103	0.732	0.650	0.179	-0.061	0.951	0.846	0.118	0.117
BSC_lrng_grwth_prspctv_org _cptl_emply_mtvtn	0.539	0.062	0.642	0.573	0.183	-0.044	0.893	0.882	0.076	0.092
BSC_lrng_grwth_prspctv_org _cptl_gols_missn	0.550	0.080	0.654	0.582	0.184	-0.054	0.908	0.631	0.092	0.102
BSC_lrng_grwth_prspctv_org _cptl_imprvmnt	0.575	0.071	0.708	0.625	0.156	-0.044	0.925	0.856	0.094	0.095
BSC_prc_prspctv_dy_t_dy_op rt_trng	0.578	0.077	0.694	0.628	0.160	-0.045	0.907	0.886	0.101	0.085
BSC_prc_prspctv_rglr_msrmt	0.498	0.121	0.608	0.542	0.150	-0.055	0.807	0.775	0.146	0.195
BSC_prspctv_univ_custmr_pr spctv	0.787	0.059	0.671	0.803	0.129	-0.089	0.862	0.758	0.059	0.088
BSC_prspctv_univ_fincl_prsp ctv	0.791	0.060	0.682	0.828	0.131	-0.089	0.858	0.753	0.055	0.079
BSC_prspctv_univ_lrng_grwt h_prspctv	0.759	0.068	0.644	0.747	0.146	-0.080	0.880	0.779	0.067	0.093
BSC_std_stsf_giv_qulty_educ	0.607	0.103	0.758	0.668	0.177	-0.088	0.963	0.782	0.111	0.113
BSC_std_stsf_invlv_desic_mk g	0.633	0.091	0.781	0.690	0.180	-0.098	0.957	0.764	0.098	0.107
BSC_std_stsf_srvy_expt	0.663	0.089	0.821	0.731	0.169	-0.087	0.951	0.724	0.095	0.098
Effctvss_led_grp_efctv	0.001	0.877	0.038	0.018	0.114	-0.012	0.086	0.091	0.804	0.551
Effctvss_metng_jb_ned	-0.011	0.874	0.036	0.002	0.095	-0.046	0.073	0.079	0.776	0.553
Job_Stisf_wth_TQM_Outcom es	0.604	0.093	0.737	0.651	0.183	-0.091	0.957	0.998	0.110	0.115
Job_Stisf_wth_TQM_implm	0.616	0.101	0.748	0.663	0.184	-0.086	0.967	0.998	0.114	0.117
Nn_ldrshp_lssz_fr_dcisn_avdn c	-0.048	-0.024	-0.086	-0.061	-0.078	0.976	-0.080	-0.089	-0.046	-0.080
Nn_ldrshp_lssz_fr_invlvmt_av dnc	-0.037	-0.040	-0.085	-0.059	-0.078	0.979	-0.077	-0.084	-0.058	-0.082

Org_Cimitmt_Ledr_implm_TQM	0.794	0.060	0.982	0.888	0.124	-0.095	0.852	0.745	0.057	0.084
Org_Comitmt_Extr_efrt_try_hdr	0.836	0.033	0.992	0.935	0.108	-0.081	0.820	0.723	0.052	0.075
Org_Comtmt_Extr_efrt_dg_mr-thn_expt	0.819	0.032	0.992	0.920	0.116	-0.083	0.834	0.738	0.044	0.064
TQM_acdmc_auto_acdmc_yr	0.962	0.006	0.857	0.939	0.102	-0.055	0.715	0.626	0.034	0.035
TQM_acdmc_auto_std_sbmsn	0.939	-0.008	0.718	0.781	0.085	-0.036	0.608	0.548	0.013	-0.002
TQM_acdmc_auto_stf_rcrtrt	0.975	-0.015	0.794	0.867	0.103	-0.034	0.660	0.582	0.015	0.013
TQM_fincl_auto_mng_avbl_bdgts	0.795	-0.017	0.806	0.914	0.062	-0.063	0.642	0.559	-0.006	0.024
TQM_fincl_auto_affct_absnc_inffncy_accnt_bdy	0.910	0.007	0.913	0.966	0.111	-0.059	0.754	0.664	0.030	0.040
TQM_fincl_auto_mng_univ_shft_stat_ovrsght_gov	0.881	0.064	0.809	0.908	0.118	-0.053	0.667	0.581	0.118	0.069
TQM_fincl_auto_rcrut_mntrd_stat	0.801	-0.002	0.880	0.958	0.077	-0.057	0.705	0.617	0.020	0.043
TQM_fincl_auto_undrtk_govng_brds	0.871	0.001	0.954	0.975	0.095	-0.056	0.779	0.684	0.023	0.046
TQM_gov_auto_afct_pstvlly_perf	0.042	0.133	0.050	0.048	0.490	-0.122	0.065	0.060	0.136	0.119
TQM_gov_auto_slf_gov_mde	0.095	0.071	0.110	0.089	0.902	-0.031	0.176	0.181	0.074	0.088
Trnsctl_indv_cnsdr_dvlp_othr_strgth	0.039	0.732	0.059	0.056	0.134	-0.079	0.119	0.128	0.897	0.821
Trnsctl_mngmt_exptn_actv_fc_s_trck_mstk	0.010	0.826	0.034	0.025	0.116	-0.047	0.089	0.102	0.969	0.694
Trnsctl_mngmt_exptn_psf_flr_intrf_prbl	0.018	0.875	0.048	0.037	0.110	-0.034	0.087	0.097	0.941	0.559
Trnsctl_mngmt_exptn_psf_inrtf_chrc_prbl	0.009	0.686	0.050	0.022	0.087	-0.030	0.072	0.078	0.840	0.473
Trnsf_idlzd_inflc_atrbt_gd_grp	0.016	0.536	0.065	0.025	0.108	-0.067	0.097	0.101	0.584	0.916
Trnsf_idlzd_inflc_atrbt_pwr_cfdnc	0.011	0.512	0.074	0.056	0.110	-0.069	0.100	0.100	0.616	0.943
Trnsf_idlzd_inflc_bhvr_clctv_sns_mssn	0.022	0.616	0.065	0.037	0.126	-0.060	0.112	0.121	0.679	0.952
Trnsf_idlzd_inflc_bhvr_strng_sns_prps	0.033	0.681	0.088	0.061	0.155	-0.104	0.141	0.143	0.817	0.839
Trnsf_indv_cnsdr_cnsdr_diffrned	0.012	0.511	0.065	0.046	0.103	-0.085	0.087	0.088	0.543	0.895
Trnsf_intlct_stml_critc_assmpt_rexam	-0.006	0.564	0.053	0.030	0.093	-0.067	0.074	0.076	0.601	0.901

1.3 Internal Consistency Reliability: Composite Reliability:

For the accurate assessment of the internal consistency reliability, composite reliability provides elucidations of the consistency of the latent construct indicators in terms of their contribution to the assessment of their corresponding constructs (Koufteros, 1999).

Table 20: Composite Reliability

Constructs	Composite Reliability
Transformational Leadership	0.966
Transactional Leadership	0.952
Laissez-Faire Leadership	0.977
Effectiveness	0.868
Leadership Style	0.941
TQM Academic Autonomy	0.972
TQM Financial Autonomy	0.976
TQM Governance Autonomy	0.972
Total Quality Management	0.949
Job Satisfaction	0.998
Organizational Commitment	0.992
Organizational Performance	0.991

The findings from this measure indicate that all the constructs project substantially the cut-off 0.7 (Bagozzi & Yi, 1988). The values vary from 0.86 to 0.99, which complies with the criteria laid down to vindicate the internal consistency reliability of the model.

1.4 Multi-collinearity:

To process the data and decide on the existence of multi-collinearity and its extent, the Variance Inflation Factor (VIF) is the prevalent indicant (Fornell & Bookstein, 1982). The initiation of the VIF analysis allows the examination of multi-collinearity among the indicators and latent variables. VIF is the estimation of how much the variance of an indicator is explained by the rest of the indicators of a particular construct. A VIF's value should not exceed five even though Hair et al., (2016) propose even a more resilient criterion and maintain that VIF should be inferior to 10. Any VIF values that surpass 10 showcases a severe degree of multi-collinearity. However, the values that score beneath the admissible threshold of 10 are discarded from being serious concerns to the formative models (Gujarati, 2003). When treating indicators, the decision to integrate an indicator or disregard it from the model ought to be based on the analysis of multi-collinearity. This is due to the numerous methodological and interpretational complexities that result from the indicators with excessive inter-correlations or multi-collinearity.

1.5 Variance Inflation Factor (VIF):

Table 21: Variance Inflation Factor (VIF)

	JOB SATISF	LEADERSHIP STYLE	ORG PERFORMANCE	ORG COMMITMENT	TOTAL QTY MGT
academic autonomy					5.385
effectiveness		5.384			
financial autonomy					5.383
Governance autonomy					1.011
job satisfaction			2.239		
laissez-faire		1.008			
leadership-style	1.001				
org committment			2.239		
total quality mgt	1.001			1.000	
transactional		6.521			

Building on the above statistical tests, this study's measurement model authentication has been established through the vindication of its convergent validity, discriminant validity, and reliability. Broadly, the outcomes exceed substantially the minimum requirements required to substantiate the entire process underlying this first stage of PLS model assessment, which confirms the strength and adequacy of the proposed conceptual framework of this thesis.



1.6 PLS-SEM Structural Model

1.6.1 Path Coefficient: Hypothesis Testing & Structural Relationship

In this study, the *P*-value approach embarks on probing into the research data relative to the hypothesis in view of accounting for the statistical significance. Therefore, *P*-value results and interpretations are grounded on the assumption of being statistically significant or non-significant. In this respect, the validation or invalidation of the hypotheses depends on the cut-off 0.05. To determine the statistical significance, *P* values are partitioned into three outcomes: (a) $p < 0.05$; (b) $p > 0.05$; and (c) $p = NS$ (Kock, 2014). When the *P*-value achieves beneath the significance limit (0.05), the null hypothesis is immediately disproved.

Table 22: Path Coefficient: Hypothesis Testing & Structural Relationship

Hypo	Relationships	Std. Beta	Sample Mean (M)	Std. Error	T-value	P-value	Decision
H5	Transformational -> Leadership-style	0.561	0.560	0.010	54.780	0.000	Supported
H6	Transactional -> Leadership-style	0.373	0.373	0.006	63.220	0.000	Supported
H7	Laissez-faire -> Leadership-style	-0.025	-0.023	0.013	1.858	0.064	Not Supported
H8	Effectiveness-> Leadership-style	0.159	0.159	0.005	32.804	0.000	Supported
H9	Leadership-style-> Job satisfaction	0.100	0.101	0.035	2.848	0.005	Supported
H10	Leadership-style-> Org commitment	0.753	0.752	0.026	28.999	0.000	Supported
H11	Financial Autonomy -> Total Quality Mgt	0.650	0.649	0.007	97.077	0.000	Supported
H12	Governance Autonomy -> Total Quality Mgt	0.024	0.024	0.006	3.797	0.000	Supported
H13	Academic Autonomy -> Total Quality Mgt	0.371	0.371	0.006	65.470	0.000	Supported
H14	Total Quality Mgt -> Job satisfaction	0.656	0.657	0.033	20.030	0.000	Supported
H15	Total Quality Mgt -> Org commitment	0.911	0.910	0.013	72.051	0.000	Supported
H16	Job satisfaction -> Org Performance	0.752	0.753	0.021	36.453	0.000	Supported
H17	Org commitment -> Org Performance	0.285	0.285	0.023	12.645	0.000	Supported

The displayed outcomes in the table 23 provide the statistical grounds (path coefficients, standard errors and t-statistics) for the ensuing analytical accounts for the validation or

invalidation of the individual hypotheses predicted throughout this study. The bootstrapping procedure has been applied for the generation of the subsamples (Hair et al. 2011).

1.6.2 Empirical Results of Hypotheses Tests:

Leadership Style:

- **Hypothesis 1:** claims that there is a positive relationship between transformational practices and the perception of leadership style within organizations, which reflects on the employees' performance favourably. The coefficients reveal that the hypothesized path underlying the relationship between transformational and leadership style proved to be highly significant with $\beta = 0.561$ and P value = 0.000. What is more, the T-statistics (T-value) exceed substantially the cut-off 1.96 (Wong, 2013) and reaches 54.780, which provides a strong substantiation and support for the fifth hypothesis.
- **Hypothesis 2:** entails a negative perception of leadership style due to the exerted transactional practices, which implicate unfavourable employees' performance. The descriptive statistics related to the relationship between transactional practices and leadership style were found to be very substantial as the aggregate of the T-statistics received the sizeable value of 63.220, and the P value displayed a high significance with 0.000 ($p < .05$). Therefore, as reported by these outcomes, the sixth hypothesis is vindicated in this research.
- **Hypothesis 3:** suggests that non-transactional leadership (laissez-faire) practices will lead to a negative perception of leadership style, which affects employees' performance unfavourably. This entails the assumption that the organizations managed by non-transactional leaders will underperform. Yet, the statistical evidence from PLS coefficients indicates that this hypothesis is refuted with a T-statistics average of 1.858, that is under the required threshold of 1.96 (Wong, 2013) and a P value of 0.064, which deviates from the acceptable ratio of 0.005 to corroborate the hypothesis. Therefore, the non-significance of this hypothesis is confirmed.
- **Hypothesis 4:** predicates that effectiveness will lead to a positive perception of leadership style, which affects employees' performance favorably. The research outputs confirm the statistics' compliance with the requisites for the support of the assumption. Therefore, with Standard $\beta = 0.159$, T value = 32.804, and P value = 0.000, the strong significance of this hypothesis is attested.
- **Hypothesis 5:** states that the adoption of adequate leadership style will lead to higher job satisfaction among employees. Based on the indicators of the table 23, the ninth hypothesis

has been ratified with the coefficient value of 2.848 for the T-statistics (>1.96 , Wong, 2013), and a significant P value of 0.005.

- **Hypothesis 6:** posits a positive relationship between the adoption of adequate leadership style and the achievement of a higher commitment of the employees to their organization. With the conform averages of $\beta = 0.753$, T value (T-statistics) of 28.999, and P value = 0.000, this hypothesis has been amply authenticated and supported.

Total Quality Management:

- **Hypothesis 7:** advances that financial applications will have a negative effect on total quality management implementation in Moroccan higher education. In default of a total autonomy from the state financial control and in the absence of effective accounting bodies, it is assumed that financial applications will have a negative impact on organizational performance. The PLS coefficient outputs establish the validity of the unfavourable impact that the inadequate application of financial autonomy bears upon the execution of total quality management strategies in the studied universities. Thus, with a Beta value of $\beta = 0.650$, T value = 97.077, and P value = 0.000, the eleventh hypothesis has been corroborated and supported.
- **Hypothesis 8:** puts forward a positive effect of academic applications on total quality management implementation. Results from the PLS test lay out that the aggregate of T-statistics rates 3.797 (>1.96 , Wong, 2013) and P value achieves 0.000. Accordingly, with the path coefficients matching largely the required norms, the accuracy of this hypothesis has been validated. Thus, the academic applications that include autonomous decision-making at the level of curricula design and adoption, modularized system, semesters, and cycles are found to have a positive effect on organizational performance in Moroccan Higher education.
- **Hypothesis 9:** conjectures that Governance applications will have a positive effect on Total quality management implementation in Moroccan higher education. The P coefficients yield statistical reports that adhere to the PLS directions regarding the validation of the hypothesis. The significance of the key indicators, Standard $\beta = 0.024$, T value = 3.797, and P value = 0.000, provide evidence of the thirteenth hypothesis and confirm its authentication. Accordingly, adopting modern methods of governance based on decentralization, deconcentration, and self-governance enhances the administrative services and exerts a positive effect on organizational performance in Moroccan higher education.
- **Hypothesis 10:** predicts that the implementation of total quality management will lead to higher job satisfaction among employees. The claimed correlation is established with ease

since the results obtained from PLS vindicate the conformity of the assumption with $\beta = 0.656$, T value (T-statistics) of 20.030, and P value = 0.000.

- **Hypothesis 11:** contends that the implementation of total quality management will lead to a higher commitment of the employees to their organization. The statistical data lend support to this relationship as standard β scores 0.911, T-statistics exceed considerably 1.96 (Wong, 2013), and the defining indicator P value meets the requirement of $p < 0.05$ with the strong significance of 0.000.
- **Hypothesis 12:** posits that high Job Satisfaction affects organizational performance positively. SmartPLS reports on this correlation indicate a very significant T value (T-statistics) of 36.453 and a conform Beta ratio of 0.752. Concerning the P value, it substantiates the hypothesis by achieving the strong value of 0.000.
- **Hypothesis 13:** postulates that high Organizational Commitment affects organizational performance positively. P coefficients provide evidence of this assumption with $\beta = 0.285$, T value (T-statistics) of 12.645, and P value = 0.000. Thus, this correlation has been supported. The P coefficients of the entire PLS estimations have corroborated sixteen out of seventeen hypotheses, which demonstrates the extremely strong structural model of this study.

1.6.3 Coefficient of Determination (R^2):

Henseler et al., (2009) propose three levels to gauge the inner path model's effectiveness and capacity to explain the proposed set of endogenous variables:

1. Sizeable value of the R^2 is achieved when more than two exogenous variables elucidate the endogenous ones.
2. The intermediate R^2 value of the exogenous variable is deemed quite admissible even when a limited number (less than two) of the exogenous latent variables accounts for it.
3. A noticeable drop in the R^2 value hints at the model's deficiency to explain the endogenous latent variables (Henseler et al., 2009.p, 303/304).

Therefore, the higher the R^2 value, the better and stronger the research model (Kock, 2013).

Table 23: Coefficient of Determination (R^2):

	R Square	R Square Adjusted	
Org performance	0.966	0.966	High

The R^2 value (0.966) reveals that a sizeable value of the R^2 is achieved. This denotes that the two variables leadership style and total quality management elucidate 96.6 % of the

constructs of the dependent variable organizational performance. This outcome reflects the adequacy and soundness of the structural model of this study.

1.6.4 Effect Size

The ensuing table projects the effect sizes of the supported relationships of this study. Cohen (1988) identifies three degrees of path significance related to effect size values: ⁽¹⁾ the values greater than 0.35 insinuate intensified impact; ⁽²⁾ the values ranging from 0.15 to 0.35 are characterized with intermediate effect; ⁽³⁾ and the values between 0.02 and 0.15 denote limited or inconsequential effect. In the meantime, the values that score less than 0.2 are deemed uninfluential, and therefore, unworthy of consideration even when the fitting P values are statistically substantiated. Accordingly, any effect size beneath 0.02 means the utter absence of any effect (Kock, 2013).

Table 24: Effect Size

	Org Performance	
Job satisfaction	0,752	Large
Org commitment	0,285	Medium

Therefore, there is a substantial effect (0.75) in the relationship between job satisfaction and organizational performance, whereas 0.28 denotes a medium effect in reference to organizational commitment and organizational performance supported relationship.

1.6.5 Predictive Relevance Q²:

For this arithmetic, the endogenous latent variable (the criterion) is harnessed for the computation of the predictive relevance of each latent variable in the model (Kock, 2013). For the appraisal and recognition of the adequacy of the model's predictive relevance, the value 0 forms the barometer around which the Q² validation or invalidation is resolved. Therefore, in case the Q² value exceeds zero for a particular endogenous latent variable, the fitting variable displays predictive relevance. However, the Q² values that are equivalent to or beneath zero demonstrate a lack of predictive relevance (Kock, 2013).

Table 25: Predictive Relevance Q2

Total	SSO	SSE	Q ² (=1-SSE/SSO)	
Org performance	13340.000	2549.346	0.809	High

The table 26 provides evidence of the high predictive relevance of the PLS structural model as organizational performance's rating largely exceeds the value 0 and achieves 0.80.

1.6.6 Goodness of Fit of the Model (GOF):

The goodness-of-fit index (GoF) seeks the measurement of the entire fit of the suggested PLS path model to account for its adequacy with the empirical findings. This test gives evidence of the plausibility of the integrality of the research model. Therefore, the decision whether GoF value reflects sizeable (over 0.36), intermediate (0.25), inadequate fit (0.10), or no fit at all (btw 0 and 1) is made through the computation of the R square and AVE to generate the GoF of the whole model (Wetzels et al., 2009).

Table 26: Goodness of Fit of the Model (GOF)

R Square	0.966	
Average Variance Extracted (AVE)	0.817	
GO F	0.888	Large GoF

According to the above Table 27, it can be concluded that the GoF model of this study is substantially large (0.88), which accounts mostly for the plausibility and validity of the global PLS path model of this study.

1.7 Mediators Analysis: Preacher & Hayes' (2008) Method

A two-stage process has been initiated to conduct mediation analysis. Thus, the significance of the straightforward impact that the exogenous variables exert on the endogenous variables (direct effect) has been accounted for before incorporating any mediation analysis (indirect effect) by means of Bootstrapping.

Phase One: Total Effect

Table 27: Total Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	
LEADERSHIP STYLE -> ORG PERFORMANCE	0.085	0.087	0.028	3.034	0.003	Significant
TOTAL QTY MGT -> ORG PERFORMANCE	0.753	0.752	0.026	28.999	0.000	Significant

The running of PLS allows for the assessment of the path model for each bootstrap sample. In the meantime, subsequent to the examination of the path coefficient, the outer model of the inner model is gauged through the running of T-statistic ‘outer loadings’ (Means, STDEV, and T-values). The outer model loadings are appraised to be highly significant if the entirety of the T-statistics scores above 1.96 (Wong, 2013). This requirement has been achieved in this study. As shown in the above table, the aggregates of the T Statistics exceed predominantly 1.96. Thus, leadership style and organizational performance achieve 3.03, while Total Quality Management and organizational performance rate of 28.99. Ultimately, the model’s significance depends on achieving the required 0.05 rate after the carrying out of the bootstrapping procedure. The current study model has been established to be highly significant as the P values are below the cut-off 0.05. Therefore, the correlations between the independent variables (leadership style and total quality management) and the dependent variable (organizational performance) through the mediators (job satisfaction and organizational commitment) have been proven highly significant as they obtain the values of 0.003 and 0.000, respectively.

Phase Two: Lower and Upper Level

Table 28: Lower and Upper Level

						Bootstrapped Confidence Interval		
	Path a	Path b	Indirect Effect	SE	t-value	95% LL	95% UL	
Leadership-> Org Comit	0,036	0,285	0,01026	0,028	0,36642857	-0,04462	0,06514	NO
Leadership-> Job Satisf	0,1	0,752	0,0752	0,028	2,68571429	0,02032	0,13008	YES
TQM-> Job Satisf	0,656	0,752	0,493312	0,026	18,9735385	0,442352	0,544272	YES
TQM-> Org Comit	0,909	0,285	0,259065	0,026	9,96403846	0,208105	0,310025	YES

The bootstrapping analysis has shown that all direct effects, Leadership Style-> Organizational performance $\beta = 0.085$, Total Quality Management-> Org Performance $\beta = 0.753$ are significant with t-values of 3.034 and 28.999, respectively. In the meanwhile, the indirect effects and bootstrapped confidence intervals for mediation hypotheses are reported in the second phase.

This study does not diverge from the conventional confidence interval of 95%, which is heavily advocated in the literature and extensively implemented throughout empirical studies. 95% is analogous to the threshold 0.05 applied in *P*-value. Confidence intervals 95% can provide similar (or even more precise) inference of the statistical significance to the cut-off 0.05 applied in *P*-value. To proceed with the 95% confidence intervals, they are estimated to account for their upper and lower bounds. Thus, in the case where the value zero belongs to the interval's specific parameters, the hypothesis is disproved. However, when the value zero does not fit within the given range (falls outside) of the interval the hypothesis is vindicated. In plain English, the lack of statistical significance is proven when the value 0 is within 95%; whereas, the statistical significance is substantiated when the value 0 is beyond 95%.

The second step includes the effects of the following mediating variables:

- ✓ *The effect of Organizational Commitment.* The indirect effect is negative and insignificant (between leadership style and organizational performance) H18: T-value 0,366, which is not in conformity with >1.96 (Wong, 2013), the indirect effects 95% Boot CI Bias Corrected: [LL = -0,044 UL = 0,065] indicates that confidence intervals include zero demonstrating there is no mediation (Preacher and Hayes, 2008).
- ✓ *The effect of Job Satisfaction.* The indirect effect is positive and significant (between leadership style and organizational performance) H19: T-value 2,685, which is a firm value that meets primarily the requirement >1.96 (Wong, 2013), the indirect effects 95% Boot CI Bias Corrected: [LL = 0,020 UL = 0,130] indicates that confidence intervals do not entail zero demonstrating there is a mediation (Preacher and Hayes, 2008).
- ✓ *The effect of Job Satisfaction.* The indirect effect is positive and significant (between Total Quality Management and organizational performance) H20: T-value 18,973, which is a strong value that meets mostly the requirement >1.96 (Wong, 2013), the indirect effects 95% Boot CI Bias Corrected: [LL = 0,442 UL = 0,544] indicates that confidence intervals do not entail zero demonstrating there is a mediation (Preacher and Hayes, 2008).

- ✓ *The effect of Organizational Commitment.* The indirect effect is positive and significant (between Total Quality Management and organizational performance) H21: T-value 18,973, which is a solid value that meets largely the requirement >1.96 (Wong, 2013), the indirect effects 95% Boot CI Bias Corrected: [LL = 0,442 UL = 0,544] indicates that confidence intervals do not entail zero demonstrating there is a mediation (Preacher and Hayes, 2008). Overall, the mediation effects are statistically significant, with the exception of the mediation hypothesis 18, which entails an insignificant correlation between leadership style and organizational performance through job satisfaction.

2 OCAI: Organizational Culture data Analysis

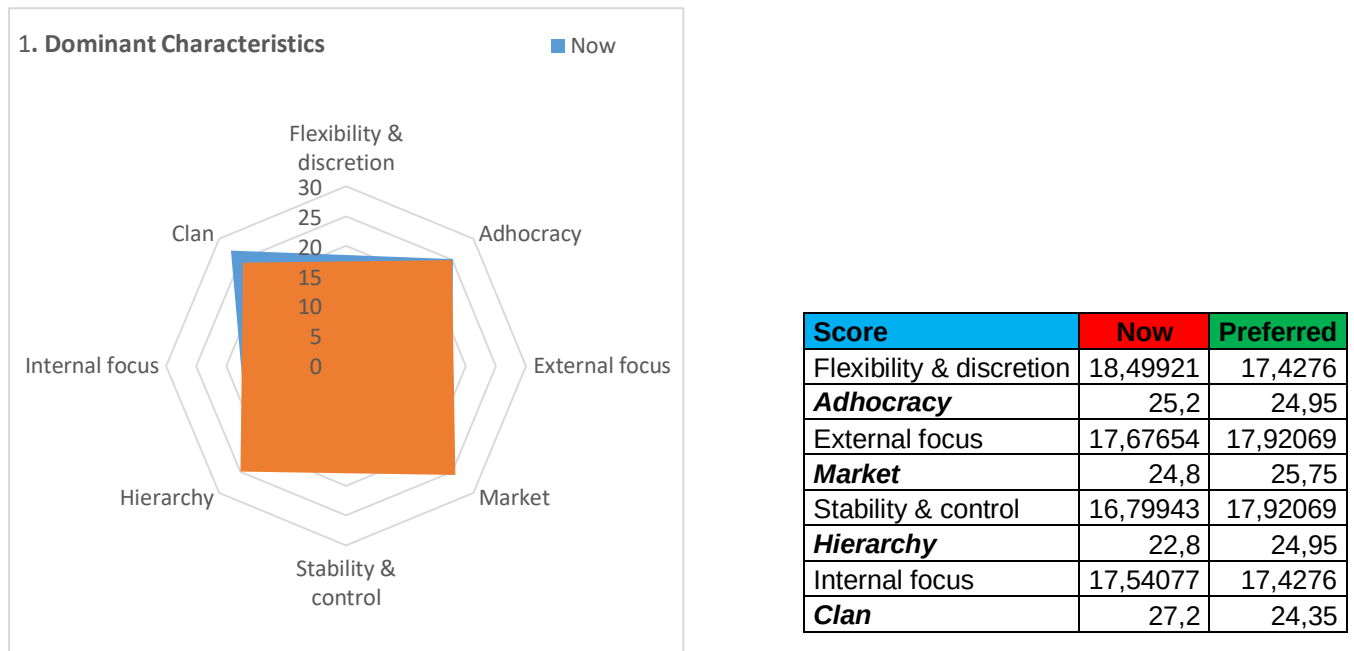


Figure 27: OCAI Dominant Characteristics (Now-Preferred)

Regarding the first aspect (dominant characteristics), clan culture achieves the highest score with 27.2 points. Therefore, the predominant characteristics foster the informal and amicable correlation between the employees and the leadership. The prevailing climate of cohesion and teamwork boosts employee involvement and participation. Thus, hypothesis 1, which posits a positive effect of clan culture on organizational performance, was ratified. The organization is regarded as a household where everyone invests heavily in self-managed work. Leadership places a premium on loyalty and commitment by facilitating the tasks and empowering individuals via rigorous human development programs. The other types of culture obtained the following outcomes: Adhocracy culture (25.2 points), Market culture (24.8 points), and Hierarchy culture (22.8 points). These outputs highlight a difference between the current and the preferred situation that does not exceed 5 points in any displayed culture types. Noteworthy, the maximum adequate difference is 10 (Cameron & Quinn, 2006). Therefore, Special focus should be given to clan culture, hierarchy culture, market culture, and adhocracy culture with the achieved gaps of 2.85 (the broadest variance), 2.15 (decreases), and 0.95 points (increase) respectively. Alternatively, the preferred situation reveals that what was rated as a dominant culture in the current situation turned out to be in the list's tail with 24.35 for the clan type. Meanwhile, the Market culture heads the list with the desired average of 25, 75 succeeded by two identically rating cultures: hierarchy and adhocracy (24.95 points).



Score	Now	Preferred
Flexibility & discretion	16,96821	16,78735
Adhocracy	24,85	21,95
External focus	17,39303	17,05078
Market	24,35	26,75
Stability & control	18,29521	18,44404
Hierarchy	27,6	25,45
Internal focus	17,82577	18,13619
Clan	23,2	25,85

Figure 28: OCAI Organizational Leadership (Now-Preferred)

Subordinates perceive their leaders as highly bureaucratic managers who strive to maintain formal rules, external coordination, monitoring, and smoothly run organizations. This type of culture's internal orientation is manifested in the extremely formalized and structured bureaucracy that characterizes the workplace. The emphasis is mainly on achievement and productivity at the expense of employees' needs and comfort. The central values that prevail in this culture are long-term stability, predictability, and efficiency (Cameron & Quinn, 2006). Concerning this second aspect, employees are convinced that Hierarchy culture is very prevalent in the workplace (27.6 points). Thus, hypothesis 2, which posits a negative effect of hierarchy culture on organizational performance, was substantiated. They also believe that the leaders' role is to prompt the employees to think out of the box and predict any innovation (adhocracy, 24.85 points). The leaders are considered effective producers and competitors who direct the work towards achieving stretch goals and targets (Market, 24.35). However, the leaders are less likely to be mentors and team builders who link success to organizations' prevailing internal climate (clan, 23.2 points). In regard to the extent of difference between the current and the preferred situation, hierarchy culture decreases by 2.15 points paving the ground for Market culture to dominate with an increase of 2.4 points. This accounts for the employees' desire to work with leaders who set goals and incentives to trigger their motivation and performance. They are eager to be led by leaders who are effective producers and competitors. Another increase is observed within the clan type with 2.65 points, whereas adhocracy decreases by 2.9 points. All these scores are within a reasonable threshold of 10 points to consider culture as adequate (Cameron & Quinn, 2006).

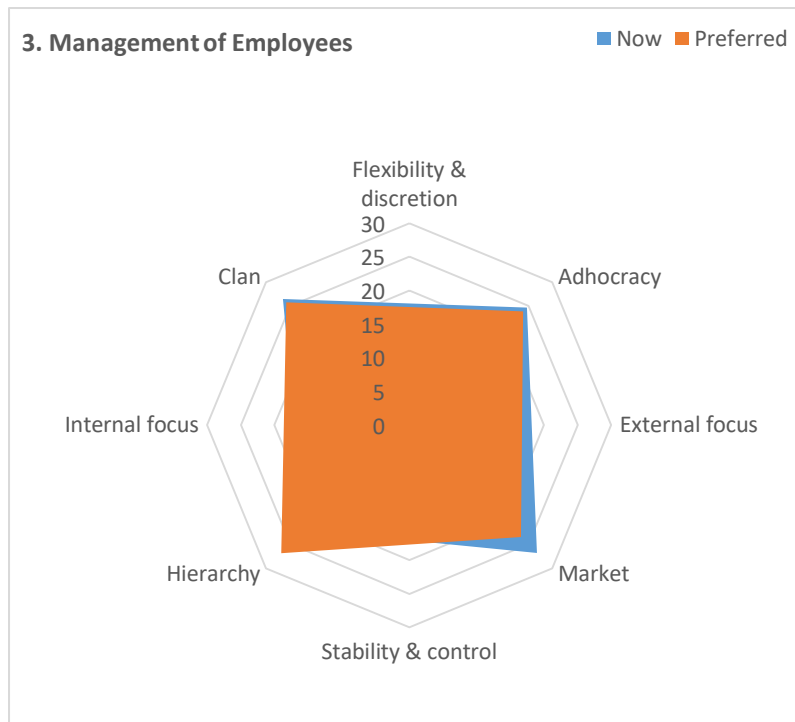


Figure 29: : OCAI Management of Employees (Now-Preferred)

The third aspect (management of employees) yield outcomes that put the Market type of culture slightly on the top of the list with 26.8 points. Thus, organizational values such as competitiveness, productivity, profitability, setting goals, achieving goals, and fostering effectiveness are the hallmarks of managing subordinates (Cameron & Quinn, 2006). Thus, hypothesis 3, which posits a positive effect of market culture on organizational performance, was vindicated. In the meantime, the way leaders handle employees involves informality, teamwork, employee engagement, empowerment, cohesion, participation, consensus, loyalty, and self-managed work, establish the organization as a household where everyone invests heavily in self-managed work (clan, 26.5). These results reflect the miscellaneous nature of the management values and strategies prevailing in the organizations. A bit Lower score was assigned to Adhocracy (24.7 points), putting thus less emphasis on managerial practices that entail visioning, risk-taking, innovating, and entrepreneurial strategies (Cameron & Quinn, 2006). Hierarchal managerial practices drop into 22 points. This reduces the role of the formalized and structured bureaucracy, standardization, efficiency, accountability, predictability, and stability among the studied organizations (Cameron & Quinn, 2006). Concerning the discrepancy between the existing and the sought-after culture, comparatively steady results are obtained as the maximum decrease was 3.35 points, as observed in the market type. In contrast, the highest increase was 4.85 points achieved by the hierarchy culture. Both Adhocracy and clan types received decreased ratios of 0.8 and 0.7, respectively.



Figure 30: OCAI Organization Glue (Now-Preferred)

The subsequent aspect considers establishing formal rules, external coordination, monitoring, and organizations' smooth running as the predominant components that hold the organization together (Hierarchy, 26.05). Meanwhile, commitment, cohesion, and teamwork boost employee involvement and participation (clan, 25.95 points).

With a slightly Inferior score (25.45), the market type emphasized having a common goal to work on as the organizations' binding factor. Adhocracy's average indicates a lower priority for this externally-oriented culture that focuses on the change as a booster of creativity and innovation among employees (22.55 points).

For the analysis of the preferred situation, the hierarchy culture seems to prevail with a score of 27.2. This provided evidence of this type of culture's adequacy and predominance in both current and desired cases.

In the meanwhile, while a noticeable but conform decrease was observed in market culture (3.55), slight but significant increases were detected in adhocracy type (1.9 points), hierarchy (0.7), and clan (0.5).

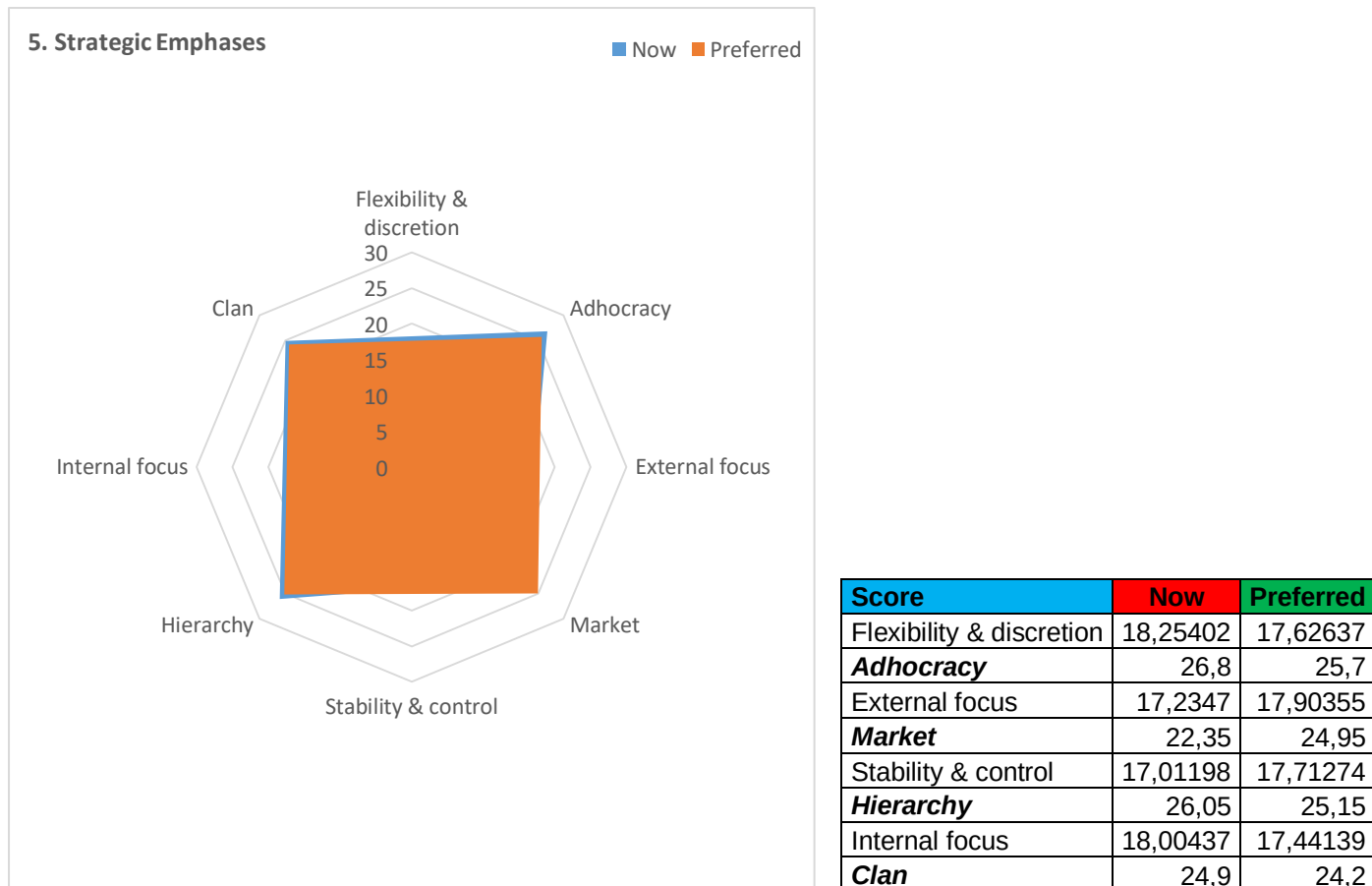
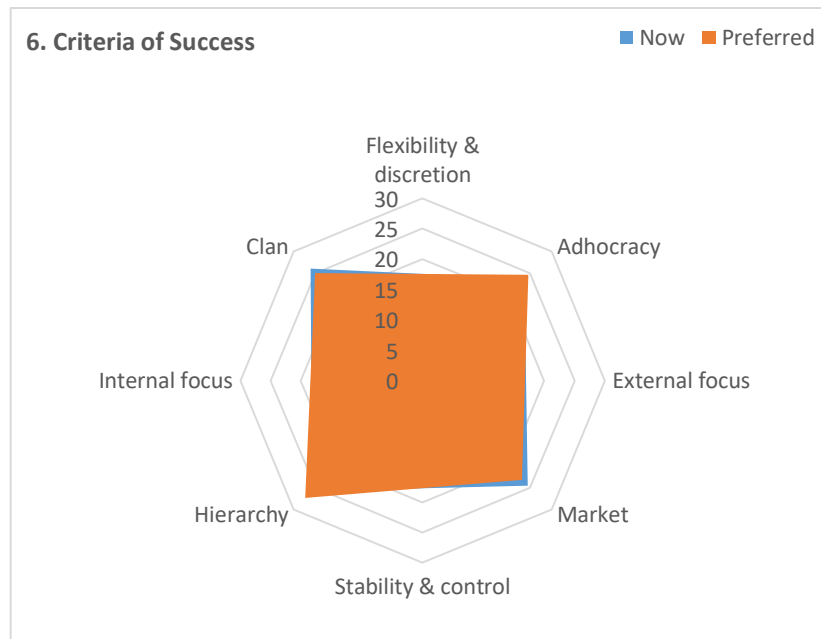


Figure 31: OCAI Strategic Emphases (Now-Preferred)

With the Adhocracy score of 26.8 points, organizations place much emphasis on individuality, risk-taking, accomplishing targets, expanding the market share, and anticipating the future (Cameron & Quinn, 2006). Thus, hypothesis 4, which posits a positive effect of adhocracy culture on organizational performance, was established. Subsequently, hierarchy achieves 26.05 points, thus bringing a special focus on long-term stability, predictability, and efficiency (Cameron & Quinn, 2006). In the third-ranking, Clan obtains 24.9 points, which underscores building trust, engaging members, mentoring, cooperating, facilitating, empowering, and team building. Ultimately, the Market type was assigned culture 22.35 points; this ratio denotes an organizational strive to accomplish effective production, competitive outcomes, and goals achievement. The extent of divergence between the current and the preferred situation remains within the acceptable level of fewer than 5 points. Thus, the sharpest increases touched the market culture by 2.6 points, whereas the residual three types indicated decreases of 1.1 concerning adhocracy, 0.9 for hierarchy, and 0.7 per clan culture.



Score	Now	Preferred
Flexibility & discretion	17,55003	17,53511
Adhocracy	23,7	24,6
External focus	17,01947	16,84782
Market	24,45	23,1
Stability & control	17,71969	17,69535
Hierarchy	25,7	27,3
Internal focus	18,29555	18,45508
Clan	26,05	25

Figure 32: Criteria of Success (Now-Preferred)

The last aspect accounts for how organizational success is described to identify the underlying criteria deployed to frame it. The clan pattern was assigned numerous embedded descriptions such as supportive, collective, encouraging, inclusive, amicable, friendly, and informal. It was also qualified as a family where cordiality and friendliness are well-observed everywhere (clan culture: 26.05 points). An approximately high score was revealed in the hierarchy culture (25.7 points). Hierarchy stands for the top-down authority model that governs the communication process from the lowest academic staff to the highest university executive (Smith, 1990). This communication channel and well-defined procedures and bureaucracies determine the extent of fulfillment and success in organizations. In the third position, the market share and competitiveness as key determinants of success (market, 24.45 points). Finally, the last culture type brings forth the Adhocracy type, which articulates success factors related to the extent to which members are counseled and involved in the decision-making process related to innovation schemes and projects. Thus, with 23.7 points, employees highlight incentives to stimulate their effective contribution and creative innovation in different schemes. The degree of divergence between the current and the preferred situation conformed to the admissible cut-off 10 points determined by Cameron & Quinn (2006). All the increases (adhocracy, 0.9; hierarchy, 1.6 points) and all increases (clan, 1.5; market, 1.35) fall within the strongly acceptable range of adequate culture type.

3 Qualitative Discussions of Findings Thematic & Coding Schematization

3.1 Emergent Themes: Organizational Culture

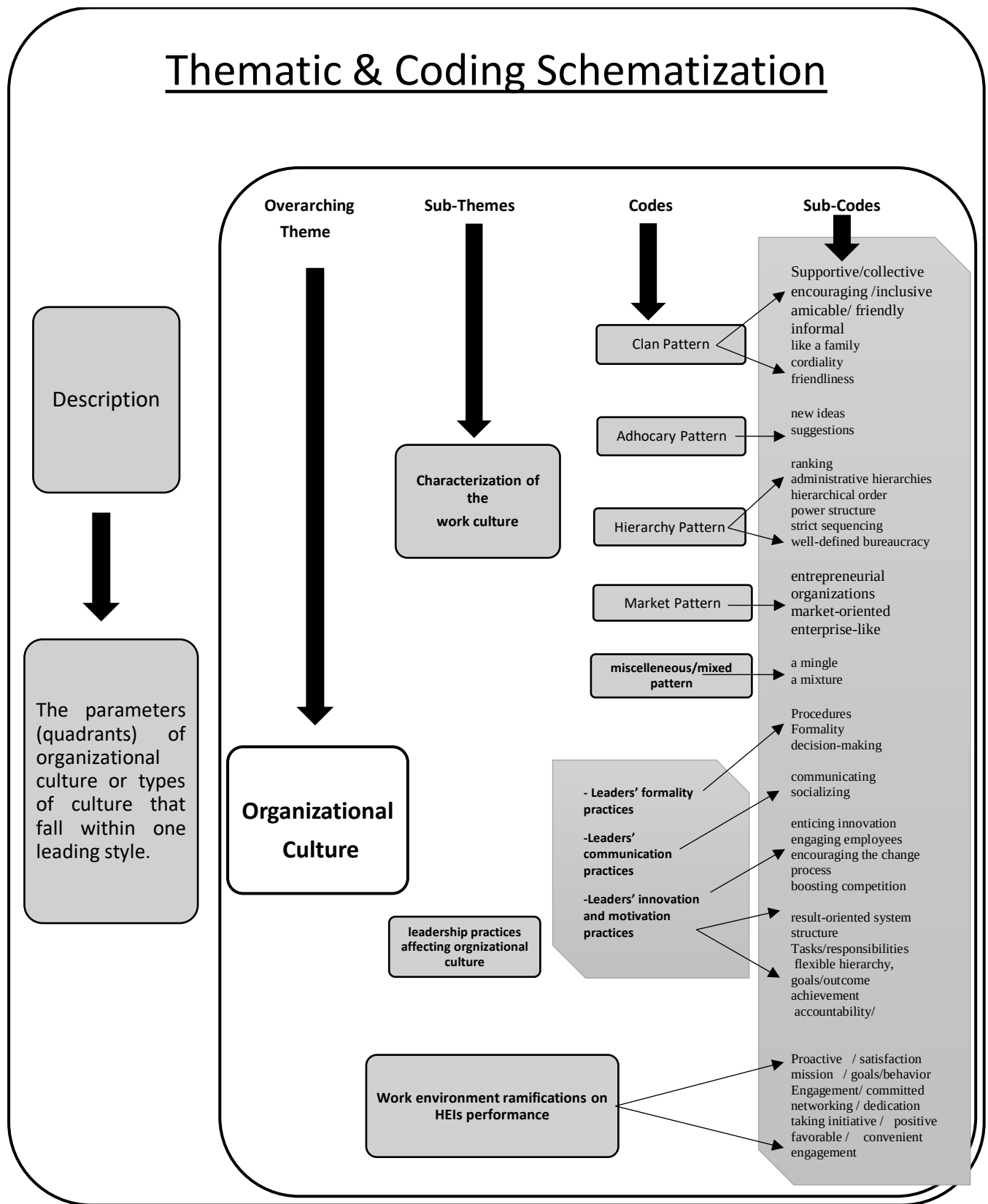


Figure 33: Thematic & Coding Schematization of Organization Culture

▪ **Overarching Theme One: Organizational Culture**

The thorough analytical examination and overview of the transcripts' section relative to the overarching theme of organizational culture has led to the disclosure of three emergent sub-themes. These are (1) *the characterization of the work culture*, (2) *leadership Practices affecting organizational culture*, and (3) *work environment ramifications on HEIs performance*. Further exhaustive screening of these meaningful sub-themes unveiled nine codes partitioned as follows: the first five codes, which are *clan pattern*, *adhocracy pattern*, *hierarchy pattern*, *market pattern*, and *miscellaneous / mixed patterns*, have bearing on the first sub-theme. The second sub-theme brings into focus the four ensuing codes: (1) *leaders' formality practices*, (2) *leaders' communication practices*, (3) *leaders' innovation and motivation practices*, (4) *and leaders' governance practices*. The third sub-theme holds no code. A more in-depth breakdown of transcripts' data yielded itemized sub-codes to the afore-stated codes. These contribute to adding detailed and concentrated nuances of meaning corresponding to each code. By way of illustration, the code *clan pattern* was assigned numerous embedded codes such as supportive, collective, encouraging, inclusive, amicable, friendly, and informal (see figure 33).

The senior management of the study universities was interviewed using nineteen open-ended questions (see appendix F). The accumulated data revealed a wide awareness of the influences and implications of the established organizational culture on both followers and the organization's performance despite the obvious disparities of the perception of 'organizational culture' among the senior executives.

Sub-theme 1: Characterization of the Work Culture

Throughout this section of the transcripts, a heavy focus was placed on the necessity to lay down and sustain the adequate culture in public universities. In this regard, the overall participants depicted culture as an influential antecedent of performance and a critical parameter that determines employees' satisfaction and commitment. This was clearly summarized when it was reported that "*what happen in and around the administration have an immediate impact on how work is performed in this university*" –Participant 11. The senior managers recognized their challenging duties in building and instituting a work environment that is conducive to the positive involvement of all the members of their organizations. Meanwhile, the concept of adequate environment or culture proved to bear varying connotations and implications for each executive. In this respect, while Participant 1 strived "*to build and strengthen a supportive culture in which a favorable and satisfactory atmosphere prevails*", Participant 6 deemed it

important to have “*a culture that goes beyond being a mere means to earn one’s living*”. In the meantime, Participant 11 considered it to be an appropriate culture “*if everything goes well and all right at work*”. Another perspective of what can be perceived as a suitable culture was reported by Participant 15, who claimed it to be “*the one with well-defined bureaucracy*” and the one “*that can ensure that tasks are completed successfully and effectively*”. These manifest discrepancies in perceiving the most suitable patterns of organizational culture can be interpreted within the proposed CVF conceptual framework of Cameron and Quinn (2006), as theorized and adopted in the theoretical frame of reference of this dissertation. Therefore, Participant’s 1 cognizance of his university culture falls somewhere between clan and adhocracy patterns. This was drawn from his statements that consider that “*all members of my organization have strong bonds at both personal and professional levels*”, also that it is “*a supportive culture*”, and that he is keen on “*listening to their new ideas and suggestions*” referring to innovative mindset within the university.

Concerning Participant 6, he characterized the dominant culture in his university as ‘*a mixture of everything*’, and considered it to be ‘*a mingle of all that*’ in reference to the four codes (clan, adhocracy, hierarchy, market). Therefore, this interviewee highlighted inherent features of the clan and adhocracy paradigms when he stated that ‘*the existing collective culture helps to alleviate daily obstacles*’ and that ‘we need to operate in an encouraging and inclusive environment.’ These descriptions are placed within the miscellaneous or mixed category that draws from a variety of features to form a hybrid culture.

Regarding Participant 11, he aligned his university culture with the clan type as he qualified it, as “a family” and confirmed “cordiality and friendliness are well-observed everywhere. What is striking is the non-reporting of the market pattern except from two participants 6 and 15. They asserted the lack of a “*market-oriented*” or “*enterprise-like*” culture in their universities as they face the challenge “*of turning into adaptive and entrepreneurial organizations*”, which is a structural and strategic change related to “*the highest authority’s priorities and policies*”.

In respect to hierarchy pattern, Participant 15 was particularly keen on advocating its effectiveness within his university when he stated, “*...I think that the only culture that should be instituted within them is the one with well-defined bureaucracy with definite goals and responsibility of every individual member and governing body inside them.*” – Participant 15-

For a more extensive investigation of the hierarchical pattern, very illuminating sub-codes were detected all through the participants’ comments. These exponents were particularly

informative in terms of identifying how each manager considers hierarchy indispensable for the running of their universities. They also inspect the extent to which employees can invest themselves and adhere to the hierarchical model, which leverage their performance. Therefore, according to Participant 11, the notion of ‘power structure’ can be a positive factor if it does not preclude friendly and cordial interactions between all members of the university. This was made quite explicit in his response *“You see what I mean, although power structure is well-established in every day management, cordiality and friendliness are well observed everywhere, with a very few exceptions maybe.”* - Participant 11 -

This view is in line with this informant’s featuring of his university as a clan pattern. This notion of “power structure” refers to the hierarchical ranking that determines the power or authority exerted among different executives and their subordinates. This goes also in line with the respondent’s 1 statement which ascertains that *“ranking isn’t very important when creating an engaging culture is targeted”*. Similarly, the “administrative hierarchies” sub-code cannot restrain a family-like environment as it was summed up in the ensuing quote:

“Despite the existing administrative hierarchies, which are crucial to the organization of work, we’re like a family. Of course, this doesn’t mean that employees should cross the hierarchical order especially when serious decisions or matters are at stake.” -

Participant 11 -

No matter how flexible and adaptive some leaders may appear to be, they all inherently stress the imperative implementation and conformity with the hierarchical pattern of management. This was maintained by the following assertion, *“no university can be managed effectively without a strict sequencing of decision-making.”* –Participant 15. This became particularly apparent when they tackled the decision-process associated with establishing strategic visions or undertaking big projects. It even became clearer when they discussed how to boost performance. This denotes that only secondary decisions and planning can be delegated to second orders executives and subordinates in most cases. What is more, performance is directed and evaluated through the strict hierarchal procedures. However, it was emerged that some participants manifested more predilection towards leadership practices that require more evolved soft skills while handling the staff and targeting a higher performance. On that account, clan and adhocracy typologies of management are deemed very pertinent with the modern methods of navigating organizational culture. Therefore, at least three participants (i.e., 1, 6 and 11) reported to use a combination of social and communication skills that take into account personal needs and character traits of their followers. These soft skills necessitate a high level

of emotional and social intelligence to bring forth a management style that introduces resilient hierarchy with a situational awareness touch and individual's competence leverage. The findings from this segment of the interview raised the huge challenges that face the current university leaders in terms of the elaboration and maintain of a comprehensive culture that incorporates hybrid styles and eclectic methods. This requires a redefining of the hierarchy structure and a reconsideration of the extent and aspects of its implementation. The objective is to come up with a new leadership mindset that copes with the exigencies of the new model of governance indoctrinated throughout the national reform of higher education.

▪ **Sub-theme 2: Leadership Practices affecting organizational culture**

Considerable amount of information on the subject of leadership practices affecting organizational culture was deduced from the integrality of the interview. Recurrent patterns of meaning brought forth this second sub-theme, along with four significant codes and a large range of adjunct sub-codes. The current sub-theme brings these data exponents into focus through delving into the ensuing codes: *(1) leaders' formality practices, (2) leaders' communication practices, (3) leaders' innovation and motivation practices, (4) and leaders' governance practices* (see figure 33). The top executives of the study universities reported the full range of practices and ramifications. They provided evidence of what they considered the most influential managerial behaviors for their universities. Therefore, all the participants provided well-briefed accounts of the variations of conduct they brought about in order to ensure satisfactory university culture.

- *Leaders' formality practices*: The first identifiable code was put into perspective under the labelling of leadership formality practices to explore the degrees and disclosures of formalities in daily exchanges and operations between leaders and their subordinates. Correspondingly, the overriding viewpoint places formality at the center of all other administrative interactions and transactions as they set rules for relationships and norms of conduct among individuals and across departments and services. This was strongly underlined in the following exhaustive testimony:

“Administrative procedures and formality set rules for the governance of any organization. They contribute to the structuring of decision-making and even accountability related to the measures or decisions that can be taken outside the required procedure. Therefore, formality in planning and carrying out projects, objectives, and schemes is at the heart of the university management.” - Participant 15.

In this section, most accounted for leadership practices fall within the managerial decisions and directions given throughout day-to-day operations that take place at different levels of the university management. Therefore, one participant indicated that he guided and assisted his subordinates in carrying out tasks:

“I do interfere to direct some of them and guide them towards a better management of some tasks. Some subordinates seek assistance when they feel unable to manage certain activities and they consult me regularly to check them out.” - Participant 11 –

Another participant confined his interference to the situations where confusion and mismanagement emerged only then, he stepped up to restore order and direct employees to a more efficient self-management of their activities as he reported that:

“Duties and how to manage them are quite clear to everyone. I don’t need to take any action to show them how to manage their work. Yet, I only intervene in urgent situations where patterns of mismanaged or poorly managed job has persisted. I definitely take measures to redress everything.” – Participant 4 –

This pattern of management tends to provide instructions and make them patent from the very beginning and intercedes only when work requires some kind of redress. In that case, corrective measures and directives are given. Formalizing decision-making process is another integral element that was highlighted by all participants with varying degrees, as it was obvious in the ensuing quotes:

“I’m keen on adhering the decision-making process to constructive debates and arguments and counter arguments in formally held meetings before I made up my mind on the most appropriate decisions.” - Participant 1 –

“I hold a quarterly meeting to discuss issues and plans related to upcoming quarter.”
- Participant 1 –

“Consequently, we adopt a more resilient decision-making strategy that is based on quick response and instant adoption and implementation of resolutions.” - Participant 6 –

“One of the primary objectives that I’ve been working on for years is the establishment of a management model that alleviates employees’ reliance on the managers and increases the span of decision-making among lower-level subordinates.” - Participant 11–

“Most of my meetings are formal.” – “I constantly receive reports from all departments. I make my decisions based on the review of these reports.” - Participant 15–

There is an evidence from the above statements that all leaders include followers in the decision-making process mainly through formal conventions and a resilient management strategy based on sharing. The notions of formality and formal practices persist among

participant 6, who stated that ‘the chain of command along with the job descriptions are determined’, and that the *“flexibility of bureaucracy is also highly sought”*.

They also inspect the extent to which employees can invest themselves and adhere to the hierarchical model, which leverages their performance. Therefore, according to Participant 11, the notion of 'power structure' can be a positive factor provided that it does not preclude friendly and cordial interactions between all members of the university. This was made quite explicit in his response *"You see what I mean, although power structure is well-established in every day management, cordiality and friendliness are well observed everywhere, with a very few exceptions maybe."* - Participant 11 -

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strategy based on sharing. The notions of formality and formal practices persist among participant 6, who stated that 'the chain of command along with the job descriptions are determined,' and that the *"flexibility of bureaucracy is also highly sought."*

This two-sided perspective called for the implementation of a strict hierarchy and resilient handling of the command chain. A similar thought was advanced by participant 11, who held that *"formality is everywhere throughout the university"* he further provided some aspects of formality as embodied in *"the formal language"* with which most university members interact; *"status distinction"* that imposes specific standards for behavior conformity; and *"restricted personnel relationships"* mostly established based on equal status. What is more, he maintained that there could always be room *"for informal interactions"* to take place but only between executives with identical rankings. Formalities were observed to predominate intercourses at all university levels despite the subtle existence of unofficial bridges between all hierarchies. It was assumed that this ensured a positive balance in the organizational culture regardless of its nature.

✓ *Leaders' Communication practices:* the second code was discerned from the main theme to shed light on the type of communication observed within the study universities and the corresponding leadership practices that affect the flow of information between executives and employees. On that account, feedback from the participants brought forward divided views regarding the communication flow, predominating official and unofficial exchanges between individuals and across departments. These were accentuated in one manager's account: *"As a senior executive of a public university, part of my responsibility is to create a free flow of communication between individual members across departments."* - Participant 1. His characterization of the spread of information as being 'smooth and free' is in line with participant's six featuring of communication as *"smooth between different employees at all levels and hierarchies of the university"* and that *"everyone can email or call everyone including senior-level and lower-level employees."* This respondent's depiction of intercommunication extends into the *"formal interactions"* that occur in departments, which entail a larger apportioning of knowledge and disclosure by formal and informal internal reporting. These include official documented exchanges, notes, interdepartmental circulars, office emails, etc.

More formality in transferring directions was perceived between the two managers. Illustrations of the formal processes deployed to convey messages were drawn from declarations: *"I'm keen on establishing communication between the different departments level. For example, as the vice-president, I hold a quarterly meeting to discuss issues and plans*

related to the upcoming quarter.” - Participant 11. This communication practice pattern is correlated to the horizontal forwarding of reports and traffic of all sorts of data that occurs at the same organizational hierarchy. Meanwhile, another manager who maintained, “I constantly receive reports from all departments, testified a different type of communication. *I make my decisions based on the review of these reports. I also provide instructions and directions to the particular offices and employees for their implementation.*” - Participant 15.

It depicts the vertical transmission of reported back data items across the integrity of the organization. Thus, the official information is conveyed through formal channels. This bears upon the standardization of the circulated info. However, three managers (i.e., participants 1, 6, and 11) also deemed informal exchanges and interworking extremely important. This was explicitly expressed in their responses on whether they socialize or not with the members of their organizations outside the workplace. On that account, the first participant showed a great enthusiasm to “*meet around tables in public places on different occasions.*” He further considered these informal meetings as consistent opportunities for “*consolidating ties and discussing work-related issues informally.*” This leader took benefits of socializing with some of the university members to strengthen his bonds with them. On the other hand, while participant 6 took socializing outside the workplace very seriously, he mentioned seminars and conferences as the only possible informal settings “*to get in touch with everyone*” and “*to get closer to staff*” Still, he remained concerned with the potential downsides of establishing such friendly relationships on “*discipline*” and “*performance*” when he admitted that:

“I do recognize that these relationships can be a double edge sword in terms of individual discipline and performance. That’s why I’m keen on making it clear that personal connections should not overlap with negative behavior—if you see what I mean.” - Participant 6—

This declaration is substantive evidence that some managers show reluctance to mingle with their subordinates outside formal settings. They tend to keep the calculated distance between subordinates. This finds justification in the ensuing testimony:

“I’m very interested in mingling with some of my staff and meet up with them to take coffee and get to know them personally. On weekends, we have the habit the meet in downtown to share what happened during the week and unload the burden that we all have. Yet, I must admit that most of these people are first or second order executives and managers in the university.” - Participant 11—

The only exception among leaders was participant 15, who was very straightforward in stating, “*I don’t have time to schedule or attend any informal meetings of any kind.*” It is worth

mentioning that this view aligns perfectly with the hierarchy pattern of the culture he strongly advocated in the first place. He was categorical when he confirmed, *"most of my meetings are formal,"* He added, *"I have no recollections of receiving any invitation regarding personal or family-like celebrations."* Noteworthy, this utter absence of any informal rapports between some leaders and their followers can be a typical characteristic among some organizations with a pure traditional hierarchical structure. Though most participants showed a sharp awareness of the benefits of socializing and communicating away from administrative barriers, they also recognize the downsides and challenges that these kinds of interactions may generate. This accounts for the limited mingling that most of them prefer to adopt as they establish amicable ties with reservation.

✓ *Leaders' innovation and motivation practices:* with regard to this code, four questions seek to investigate leaders' practices in *enticing innovation, engaging employees, encouraging the change process, and boosting competition.* These four sub-codes depict the managers' methods to stimulate and involve subordinates in the workplace. On that account, various responses were induced regarding how leaders considered innovation to be substantive leverage of higher education. Therefore, participant 1 identified three major embodiments of innovative projects undertaken within his university. There were ICT integration, the initiation of e-learning programs, and new curriculum development. These schemes were planned within the strategic vision of innovation of the university. This participant's determination to foster innovation in his organization despite the challenges was obvious in his account:

"Any organization that does not change dies. Starting from this conviction and considering that higher education is generally considered a traditional organization in terms of structure and governance; many projects have been initiated to meet the digital revolution's requirements and innovations." - Participant 1–

A leading component of higher education reform was analyzed in this statement: the digitalization of Moroccan universities. This long-term objective project is an ongoing workshop that faces many challenges. Meanwhile, the perception of innovation was a bit distinct for participant 6, who discussed it from the university's ability to come up with *"innovative ways to generate additional and sustainable financial resources."* While this manager's main concern was to put forward creative strategies to get external funds, he also intersected with the previous participant to initiate and develop *"curricula"* and *"e-learning courses."* Any form of financial funding would be most welcomed as long as it served to implement and sustain these projects as was reported:

"Still, many projects have been initiated throughout many faculties. These include looking for new and innovative ways to generate additional and sustainable financial resources such as long-term partnerships and paid programs. Besides, the acceleration of the implementation of projects related to curriculum design and the promotion of e-learning constitute new assets to our university." - Participant 6–

Participant 11 drew attention to the external elaboration and international partnerships that aim to introduce the latest management strategies, upgrade scientific research, and renovate the teaching and learning process. In that account, he made reference to 'Erasmus Mundus' and 'the European Tempus' as leading experiences in *"embracing and implementing the new advanced technologies."* In a similar vein, it was contended that the national reform's focus had been *"harnessing innovative policies and programs in view of coping with the socio-economic fabric."* For this reason, Participant 15 underscores the innovative actions in favor of launching *"new pedagogical and training programs,"* mainly through the creation and implementation of professional programs within the HEIs with open access.

The integral axes of innovation that were brought to focus entailed incorporating significant projects for advanced technologies, the development and upgrading of new curricula, pedagogical, and training schemes. This vision was formed based on the national reform of HEIs in Morocco.

Regarding the question related to the practices that university managers undertake to engage employees, it was observed that both concepts of motivation and innovation had been used interchangeably to serve the objective of enticing the staff and engaging them more effectively. This could not be clearer with participant 1, who determined two levels of faculty encouragement and involvement in the innovation process: *"service innovation"* and *"process innovation."* Meanwhile, participant 6 revealed the lack of sufficient participation in the innovation process. Hence, his encouragement of everyone to take part in the training and development programs was made quite explicit when he stated, *"These projects require the provision of incentives to the university members to stimulate their creativity and initiatives."* Hierarchical incentives can take many forms, such as financial, position promotion, academic advancement, etc., to stimulate their creativity and initiative.

Employees are the cornerstone for executing any plans that boost the feeling of membership and contribute to the organization's development. Accordingly, they partake in *"diversified and innovative pedagogical models,"* and they carry out *"technology based-projects, which were reported to be huge motivating and innovating factors."* –Participant 11– On the other hand, Organizational innovation is tightly linked to incorporating innovative

leadership/management strategy with a clear vision that *"takes into account the employees' engagement and commitment"* –Participant 15-. The leadership practices seeking to foster mobilization and participation should involve constant *"scheduling of trainings," "using the new technologies of communication and information,"* and *"regular innovative assessment such as task and project fulfillment."* Participant 15-

The participants intersect at the necessity of initiating and sustaining innovative programs at different HR training levels, promoting workability through a system of incentives, deployment of the latest technologies of communication, and the adoption of creative management styles to engage university members in the organizational culture.

With reference to *encouraging the change process* code, it seeks to unveil the various actions that leaders initiate to encourage their subordinates to take part in the change process. In this respect, *"change entails bringing new policies and methods of work into paly"* –Participant 11- It can lead to unfavorable repercussions as was pinpointed by participant 6 *"change in management or daily procedures may generate negative attitude and resistance if it is not well-planned."* Therefore, a properly planned change strategy *"required a new leadership approach that promotes this change and explains its necessity."* –Participant 15- Concerning the different practices that were suggested and implemented by leaders, they comprised *"involving them in the decision-making process," "encouraging them to think out of the box," "urging them to take initiatives,"* and *"working in teams to carry out plans."* Participant 1 seemed to deal with employees in such a way that enables them to be *"counseled rather than instructed and empowered instead of over led."* This managerial approach appears to be more inclusive than what other managers claim to apply to draw the subordinates' acceptance of the changes. In this respect, varied approaches were used, namely *"listening to their feedback"* and *"offering rewards for the accomplishment of the new activities"* –Participant 6. or *"diagnosing the personnel readiness to accept and implement them"* and *"try to introduce change gradually and highlight its benefits on them and how easy and flexible it can be implemented"* –Participant 11. Participant's 15 practices to introduce change and *"transform the university into an open platform to society"* were the adoption and implementation of *"a new leadership approach that promotes this change"* this can be executed through *"modeling it to your subordinates"* –Participant 15. Bringing forth change and enticing employees to accept it is best performed through leading by example as it represents *"the best way to make them believe in it and implement it."* –Participant 15.

The observed common practices among the participants regarding the strategies of introducing and implementing change are embodied in the gradual establishment of the change

process and the progressive elucidation of its positive effects on subordinates and organizations while modeling it using new managerial approaches.

In terms of *boosting competition* sub-code, leaders were required to describe competition aspects and practices in their organizations. Therefore, four forms of competition were drawn from the participants' comments. These were institutional competition, employees' rivalry, academic/ scientific research competition, and competition over the job market.

These features of competition conclude both open access and limited access to HEIs. Accordingly, it was held that some institutions and faculties *"have adopted national or international standards to earn ISO certifications"* –Participant 11. Besides, pursuing excellence through a well-planned quality assurance system ensures the provision of *"quality education and services."* While these goals are particularly linked to HEIs with limited access, it was reported that open access faculties *"started to initiate professional training programs that attract some category of students,"* which started a competition among these faculties. Another manifestation of institutional competition was highlighted by participant 6, who contended that there was an intense rivalry between different faculties and higher institutions with limited access over *"the most brilliant students"* and *"budgets"* granted by the state or external sources, and over *"ranking at the national level."* This was made clear in the following quote: *"There is an increasing competition among all universities for better national ranking."* –Participant 15. The subsequent level entails employees' rivalry. The most noticeable pattern was highlighted by participant 6, who stated that *"There can be a furious competition over higher positions,"* which can bring a lot of benefits in terms of creating a competing job atmosphere as was held that *"competition among university members has started to give high value to research work"* –Participant 1.

The third manifestation of competition has to do with academic and scientific research upgrades. Therefore, different participants mentioned several practices and incentives to foster research. Accordingly, Participant 1 referred to the strong competition *"over the bonus obtained from publishing in well-known indexed journals."* This practice has become a mandatory requirement for graduation. Publishing articles has become a prerequisite in recruitment contests. It has become a defining criterion and prior experience in teaching to get the post assistant professor at Moroccan universities.

The last evidence of competition was drawn from the participants has a bearing on the job market. In this respect, Participant 15 was especially insistent on the *"imperative linkage to the markets"* if universities wanted to upgrade their education system from the traditional academic mode to a more evolved and competitive one. Universities should be working with

the ultimate goal of “*integrating graduates in the job market*” through some fundamental practices such as “*establishing the best partnerships with local businesses and organizations.*” Thus, the above discussion brings to light the crucial role of universities in scheduling and carrying out schemes and policies that aim to boost competition at all levels to create a competitive advantage that distinguishes different HEIs and enables them to earn a reputation of excellence.

The ultimate code accounting for the sub-theme of leadership practices affecting organizational culture was *the leaders’ governance practices*. Much information was elicited from the interviewees and further broken down into four meaningful sub-items: *providing tasks and responsibilities, establishing flexible hierarchy, orienting organization towards goals and outcome achievement, and establishing accountability and performance assessment*.

- Regarding the first sub-code, *providing tasks and responsibilities*, it delves into daily instructions and supervision of duties. Therefore, multiple answers reflected the varied practices and approaches by which managers carry out their responsibilities. For instance, some leaders are keen on ‘assigning daily or weekly objectives’ and “*involve teams in the planning and implementing these tasks*” –Participant 1. Furthermore, others hold meetings before executing any project to “*distribute tasks*” with “*the necessary resources,*” such as time allotment, material availability, and the expected results. It was clear from the replies that these leaders work on setting roles and responsibilities for employees to make them aware of what they expect from them as it was clarified in the following statement:

“When blurry and unclear tasks emerge, most of the personnel avoid getting engaged in doing them, which may lead to the wrong fulfillment or underperformance of these activities.”–Participant 6-

While being aware of the impact of providing clear tasks on performance, some managers, such as participant 1, further highlight the previous notion that employees prefer to be given specific tasks with a predefined time slot, “*this way they become more focused on the task and make a consistent effort with the given task*” –Participant 1. In the same line of reasoning, the same idea was expressed:

“You know, in case there is a lack of clarity, what happens is that arguments and waste of energy undermine efficiency and may lead to discontentment and chaos among employees.” –Participant 11-

The idea of employees’ contentment with specific tasks falls within job satisfaction requirements, which affect general performance. This also accounts for the related research

hypothesis as it substantiates the notion that leaders' efficiency in providing clear directions does affect employees' performance positively.

- The second sub-code tackles the *establishment of a flexible hierarchy in universities*. The responses associated with it were particularly illuminating in linking the flexible type of administration to the new governance model. In contrast, the traditional bureaucracy was depicted as inflexible. Accordingly, both modes were dependent on top management methods and practices in higher education. Accordingly, two contrasting views of “*flexible hierarchy*” were found among the participants. On the one hand, some participants (i.e., 1, 11, and 15) adopt a moderate viewpoint which advocated “*less focus on departmentalization*” –Participant 1- and the possibility of empowering employees “*to make a lot of decisions and act beyond the hierarchy*” that can sometimes be “*inefficient*”-Participant 6. This will definitely “*alleviate employees*” reliance on the managers and increases the span of decision-making among lower-level subordinates. On the other hand, participant 15 maintained that the “*standardization of interdepartmental communication and the unification of procedures and decisions*” would ensure effective and flexible work partition. These two views underscore the roles of departments in making procedures and bureaucracies flexible or not.

- The subsequent sub-code touches upon the potential practices that leaders can undertake for a better *orientation of subordinates towards goals and outcomes achievement*. The major axes deduced from the rich replies involve setting “*predetermined goals with expected outcomes*,” “*aligning the employees' decisions with organization's goals*” –Participant 1. What is more, leaders should be resilient enough to “*change goals when they feel that they are not attainable or realistic*” –Participant 6. Meanwhile, participant 11 held that “*From the beginning of the year, performance goals are made quite clear to everyone.*” –Participant 11. This early establishment of goals enables employees to “*know exactly what is expected from them.*” –Participant 15. In the meantime, a standard practice among all participants is holding meetings at the outset of the academic year or quarterly to provide fixed goals. The determination of goals makes the expected outcomes clear to everyone. For instance, participant 1 worked with the university members to scheme goals for integrating new programs such as special master's programs and made the success of these plans dependent on their results. This result-oriented system ensures its continuity. Equally important are the aligned outcomes with “*the cost, human resources, and materials*” –Participant 6. He further argued that “*orienting employees towards realizing outcomes is the most important part of my job.*” The “*establishment of a common vision*”-Participant 11- and the fixation of “*short-term, mid-term, and long-term outcomes to accomplish*” supported this awareness. It was apparent

from the above arguments that setting well-planned goals with the necessary material, time slot, and directions will lead to the positive achievement of the expected performance.

Regarding the last sub-code, *establishing accountability and performance assessment*, it yielded approximately analogous feedback from all the participants, who argued that there were two types of assessment internal and external. Both types involve individuals and governing bodies that assume the responsibility of auditing universities and their affiliations. Thus, one informant was rather comprehensive in his account when he stated the *“implementation of quality assurance that has been mandated by law 01-00 is an efficient way to assess performance and determine responsibilities.”* This detailed answer brought to light one of the underlying frameworks of this study, which is law 01-00, upon which the conceptual framework of TQM was formed. This law refers to the internal and external regulatory and assessing bodies that were thoroughly discussed in this study. In the meantime, participant 1 emphasized internal evaluation within his university. He mentioned examples like *“measuring our progress against national and international standards and norms,”* and *“the evaluation of our programs, their effectiveness, and the yearly results.”* These types of evaluations are undertaken at different departmental and managerial hierarchies of the university. Participant 11 reported the existence of *“an intensified monitoring system”* that appraises various operations and programs such as enrollment procedures, exams registration, etc. He also confirmed the ongoing external evaluation process by advancing that *“external evaluation and auditing of HEIs is undertaken constantly.”* –Participant 11.

- The last participant focused on the external assessment practices that his university was planning for auditing different HEIs. Thus, he declared, *“the presidency will form a QA unit chaired by a special advisor to carry out external assessments and audits across HEIs. In the meantime, each faculty should have an internal committee in charge of self-assessment.”* – Participant 15. These assessment aspects and practices should take into account specific responsibility and accountability. This was summed up in the following quote: *“Some assessments hold direct and practical consequences on employees and students. These effects can range from promotion to a higher grade or position to performance-based monetary bonuses.”* –Participant 1-

The national reform of HEIs articulated and instituted external and internal assessment within Moroccan universities as real leverage for quality education and service. The university assumes the responsibility of organizing and developing different mechanisms to undertake quality checks at HEIs. Thus, creating units and committees of quality examination is an important instrumentality to affect the recommendations' reform scheme.

- **Sub-theme 3: Work environment ramifications on HEIs performance**

The interviewees were asked about *the ramifications of the prevalent culture on organizational satisfaction and performance*. Their responses reflected a general dominance of 'positive' and 'favorable' university culture that seemed to ensure a "very convenient" and "satisfactory" work environment. These depictions align with the diverse practices that these managers claimed to carry out to establish and maintain this kind of culture. In this context, one participant provided an overview of some of these practices:

"I'm keen on implementing managerial strategies and HR practices that sustain a favorable organizational culture. The insurance of a motivating working environment through the establishment of a system of reward and recognition has boosted employees' engagement and effectiveness." –Participant 15-

This quote determines the effects of some of the leaders' practices on their employees' engagement and involvement in the culture in which they operate and on their significant achievements of tasks. Another significant impact was observed in subordinates' behaviors as maintained in the ensuing declaration:

"The actual organizational culture's effect on employees is seen in their attitudes with their colleagues and behaviors towards their supervisors. It is true that the work can be stressful most of the time and requires a lot of efforts and interactions with many people. But, in return, there is a positive general perception of the working environment and adequate work achievements." –Participant 6-

Similarly, participant 1 linked members' devotion to their university to the positive climate reigning in the workplace and listed many aspects of this contentment that reflect in expressions such as *"they are on good terms with their colleagues"* and *"the workload is admissible."* All considered, there is an overwhelming conviction among top executives that the work conditions are satisfactory. They all correlated higher organizational performance to employees' satisfaction with their organizational culture and reported that the major barometer for measuring job satisfaction was the employees' attitudes and behaviors that show high positive interactions and engagement in their activities.

In account of *the ramifications of organizational culture on the members' commitment and performance within universities*, the responses established a liaison between the observed employees' commitment and higher performance within universities. The aspects of the influence were highlighted in many instances: *"the personnel behavior and engagement in different operations and actions, networking, the implementation of the leadership directions and objectives,"* and most importantly, *"taking initiatives and the willingness to engage in non-*

mandatory activities and plans." –Participant 6. Another manager provided another substantiation of the tight correlation between satisfaction and commitment: *"Simply put, if my employees are satisfied with their workplace conditions, they will exhibit a commitment to everything that goes on there."* Participant 11- Further implications were deduced from this respondent's revelation that most employees are committed to their workplaces as was reported that *"I think that all my subordinates do their best to complete their duties and give their utmost to show how committed they are to the mission and objectives of the university."* Participant 11-

This leader refers to the employees' identification with the organization's mission and objective. This entails attitudinal implications that are embodied in their keenness on completing their jobs. Exerting many efforts to achieve a task comes from the internal drive that engaged subordinates to feel towards their institution. Therefore, the employees who manifest a high level of commitment assume full responsibility for their duties, as they feel obligated to maintain the organization's objective of achieving.

3.2 Emergent Themes: Leadership Style

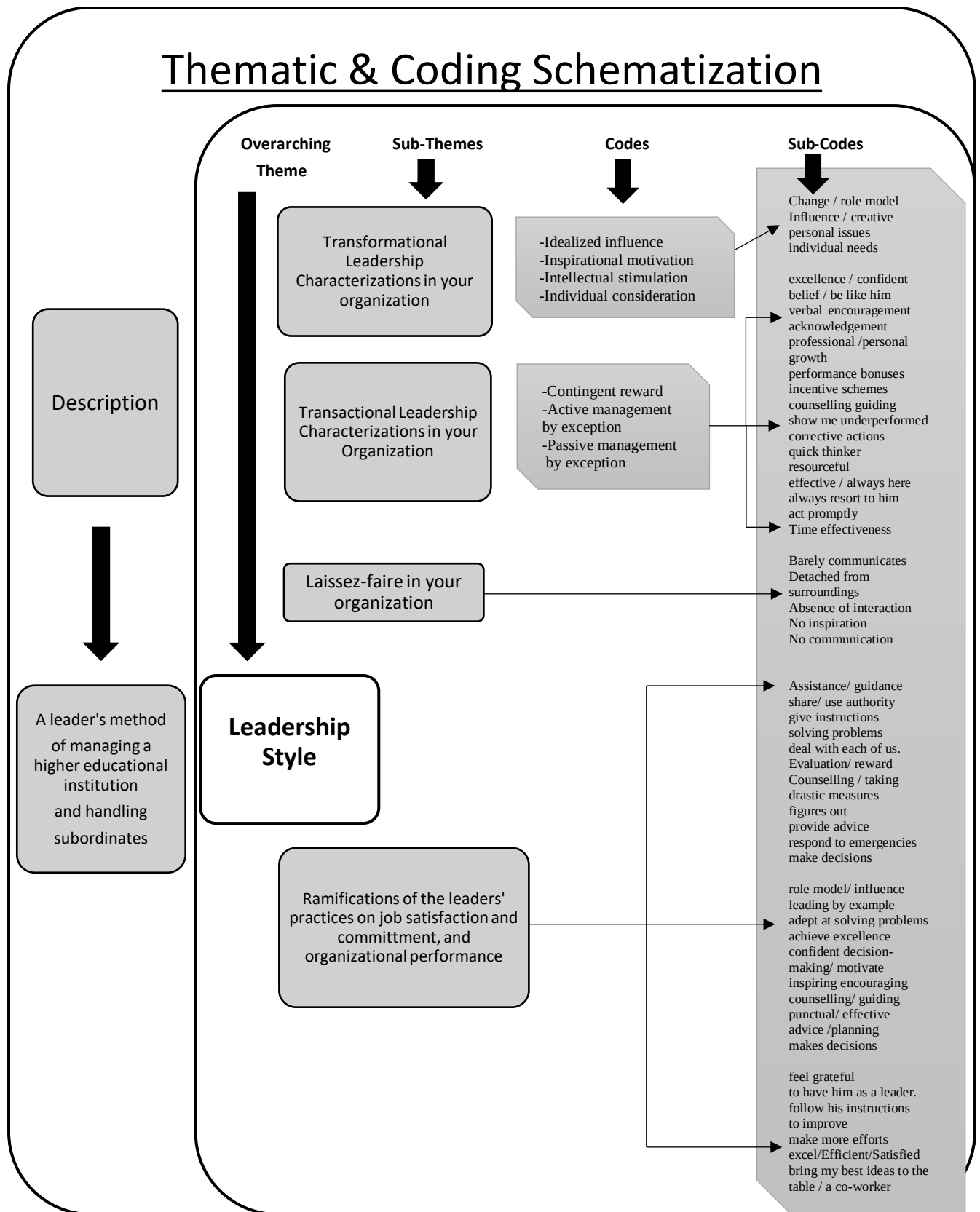


Figure 34: Thematic & Coding Schematization of Leadership Style

▪ **Overarching Theme One: Leadership Style**

The second section of the semi-structured interviews has been brought off with the intent to approach the implications of the various styles of leadership on the organizational culture and find out the entrained ramifications on subordinates' commitment and satisfaction in their universities. These issues have been investigated from followers' perspectives. On that account, the university staff members have been surveyed by dint of eleven open-ended questions (see Appendix I) to elicit how they perceive the impact of their leaders' actions and practices on their performance and work setting. Therefore, the interview respondents' extensive returns have formed the basis for the synthesis of the data. Thus, the schematization of the thematic layers in conjunction with the codification and sub-codification of the transcripts has led to the elaboration of the above map. The overriding theme of organizational culture embodies four meaningful sub-themes. These are :

1. *Transformational leadership characterization in your organization,*
2. *Transformational leadership characterization in your organization,*
3. *Laissez-faire leadership in your organization, and the ramifications of your leaders' practices on job satisfaction and commitment, and organizational performance.*

A more elaborate analysis of these sub-clusters has laid bare eleven pertinent codes divided as follows: four codes were ascribed to the first sub-theme. These are (a) *idealized influence*, (b) *inspirational motivation*, (c) *intellectual stimulation*, and (d) *individual consideration*. On the matter of transactional leadership, three defining codes were revealed: (a) *contingent reward*, (b) *active management by exception*, and (c) *passive management by exception*. The fourth sub-theme generated no significant code. Noteworthy, additional meticulous subdivision of the above codes denuded a broad-based list of sub-codes that serve to explain and interpret further specificities related to the corresponding items. For instance, the transformational leadership pattern entails many indicative sub-items such as change, role model, influence, creative, personal issue, individual needs, etc. (see figure 34).

§ **Sub-theme 1: Transformational Leadership Characterizations in your organization**

In response to how they would describe their leaders' style, many participants stated clearly that they work with managers who possess distinctive transformational features:

"I consider him to be real transformational leader because he does almost everything to support and encourage me to work within the planned vision." –Participant 6-

"My supervisor communicates the strategic vision very well. He is also very adept at translating the vision into achievable plans." –Participant 9-

"He has changed me in the sense that he directed me to the completion of tasks gradually. Thanks to his step-by-step approach I could see him playing the role model for me." "... instead, he used his influence to show me the way- Thinking of that now, I feel grateful." – Participant 5-

The respondents' alignment of their leaders' attributes with the transformational pattern has further been substantiated as they provided feedback on the first code. It concerns *intellectual stimulation* powers that their managers employ to entice them to think out of the box and figure out solutions to the various problems that they may encounter in their daily handling of tasks. Therefore, one participant praised his manager's ability to come up with new ideas to solve problems, and acknowledged his provocative methods to incite everyone to think creatively especially when faced with *"endless challenges"*. In this respect, he maintained, *"It's kind of hilarious, sometimes, the amount of new ideas he comes up with to do things."* –Participant 5. Another participant appreciated how his manager empowered him with the right instruments to figure out complex tasks innovatively when he stated, *"With the right management guidance, I was offered many tools and incentives to improve my contributions and handle the daily intricacies properly."* He recognized the critical role of the management in stimulating him to take part in overcoming daily hurdles and he considered this to be thought-provoking. The third respondent complemented his executive's drive to reflect creatively especially when they work in groups and share their ideas, *"he shares his ideas with us and this entices us to do the same and think creatively."* –Participant 9. The emphasis on having a creative mindset when assuming a role among a team was further underscored when it was reported, *"...he encourages employees to work in pairs or groups to elaborate ideas and schemes collectively."* Inciting active and collective participation is a key characteristic of this leader as it was stressed, *"These practices make us feel open to all forms of cooperation and constantly evolving work strategies to figure out new solutions to the problems."* Two participant (i.e., 5 and 9) highlighted the efforts that their leaders exerted to induce them to find out ingenious solutions to the perplexing situations that come across in their work. Stimulating employees' sense of creativity, problem-solving capabilities, and active contribution to the team projects require resourceful leaders who can *"represent the model for the entire team."* – Participant 9- and are already *"adept at solving problem."* –Participant 1.

Concerning *idealized influence*, which is the second meaningful code, the interviewees were interrogated whether their leaders took into account each follower's personal and specific needs to influence them. Three of the participants (i.e., 5, 6 and 9) reacted positively to this question. In this respect, the first reply confirmed that employees' individual needs were well

taken into consideration. Meanwhile, he explained that his manager applied two approaches to do that *"...he talks to every one of us separately in an informal way...he sounds more serious and addresses each one formally mainly about the fulfillment of a certain task."* –Participant 5. This two-faced strategy to handle individual members' needs sheds light on the formal and informal mechanisms that this manager used to influence his employees and make them feel that he was available for them regardless of the formality or informality of the situations.

The second informant brought to focus how his leader kept himself available and close from all employees despite all his duties *"...he is a good listener ...he always finds time to maintain daily contact with his employees."* –Participant 6. Another testimony in favor of leaders' interest in *'personal growth and career advancement'* of all employees was provided by participant 9. According to this interviewee, his executive seemed to have a great concern in the *'individual strengths and weaknesses'* and prompted his subordinates to complete their education to get higher degrees to occupy the ideal positions that they desire.

With reference to the third code, *individual consideration*, it provided evidence of the different approaches that leaders adopt to keep track of their subordinates' performance. Accordingly, three views (i.e., 5, 6 and 9) corroborated the one-to-one approach that their managers use to provide feedback on their performance. Implementing individualized approaches when addressing the university members was perceived as very favorable and generated appreciation on the part of the interviewees. This was summed up in the following quote:

"After almost four months of work in this faculty, I was asked to my manager's office and we had a two-hour discussion concerning how I performed tasks, my style in making decisions, the various challenges I went through and how I handled them, and the objectives I attained. To be honest, I didn't feel like it was a test or an evaluation. It was a friendly conversation in which hints about the previously mentioned issues have been conversed. I had a good impression about his feedback on my general performance, which entices me to make more efforts and excel." –Participant 6–

The friendly but serious atmosphere and the personalized setting in which evaluations take place were further highlighted by participant 5, who reported that *"he wanted to see me in his office. He addressed me in a very serious tone and let me know that it is was a good semester and that my performance was improving."* Another participant referred to the collective approach that his manager adopted to appraise how employees have been able to meet the preset objectives and goals. For this subordinate, the best way to handle personal improvement is by associating it with the group's overall achievement. Therefore, the one-to-one approach is

carried out at the level of teams and considers individual considerations. This was confirmed in his statement, *"I like this kind of evaluation as it seeks to assess the performance of the whole group rather than holding individuals responsible for the possible lack of achievement of certain schemes. It also helps to discuss and offer solutions to complete or adjust work."* – Participant 9. Notably, these participants have shared the point that the evaluation process could be a positive experience when undertaken in an individualized manner where their concerns and requirements are taken into account. The following quote consolidates this argument:

"I consider these evaluation meetings to be good opportunities to monitor the work towards the preplanned goals and expectation. They bring a lot of knowledge and help me to learn more how to get the job done. I'm not afraid of being assessed with my team." –Participant 9–

These comments characterize the assessment procedure as good opportunities and beneficial experiences when carried out by transformational leaders who consider individual consideration. The last sub-code, inspiration motivation, goes into detail regarding how leaders motivate and inspire their followers to take the initiative and be proactive. Therefore, those participants who depicted their managers as being transformational (i.e., 5, 6, and 9) singled out the actions and practices that inspired and motivated them to take the lead and engage actively in what they do. They attribute these inspirational clues to their managers as two participants stated clearly *"he keeps inspiring and encouraging me"* – Participant 5– and *"the manager outlines the vision that inspires and motivates the members of the group to carry it out with the most appropriate approach"* –Participant 6. It was clear from most answers that having motivational powers is very important to be looked at as a transformational manager.

In the meantime, triggering dynamism and initiatives from different individuals requires a special blend of leaders' qualities that include giving *"...personal initiatives and provides a lot of support and rewards to dynamic employees."* – Participant 9. The preceding views underline the leaders' proficiency in enticing subordinates' proactivity by various motivational tools and practices, thus considering these traits and actions to be integral to the transformational leadership style. Most of the comments hold a favorable tone regarding working with such type of leaders. The above discussion draws focus on the four sub-codes idealized influence, inspirational motivation, intellectual stimulation, and individual consideration and attributes them to three university leaders. Subordinates could readily distinguish the different features associated with each of these sub-items. Furthermore, there is a generally positive perception of the managers characterized as transformational leaders and acquire the above attributes.

Sub-theme 2: Transactional Leadership Characterizations in your organization

The collated data on how participants depict their leaders' style in terms of their influence and ability to transform employees into more efficient organization members singled out one manager as a transactional leader. His leadership traits and executive decisions and practices were summarized in the following testimony:

"He clarifies everyone's roles and responsibilities with extreme clarity, and he expects complete obedience in return. What is striking in working with this manager is that he adopts a reward strategy if the tasks are efficiently carried out. In the meantime, he can take drastic measures against the unfulfillment of the required tasks. Indeed, individuals are judged by their performance. This could be quite amazing if one is serious and dedicated to what they do." – Participant 10–

The most distinctive feature of this leader is the reward system with which he treats his employees. This entails specific expectations from different members and the ongoing supervision of their achievements. In terms of his strategy to elicit creativity and problem-solving decisions from employees, it was not categorized within the intellectual stimulation paradigm. He was rather described as result-driven managers who apply the carrot and stick approach to reward higher performance and punish underperformance. This was made explicit when it was reported, *"...employees who show higher innovative thought are the most rewarded and praised."* – Participant 10. The effect of this type of management was perceived to be double-sided as *"this might sound encouraging to many employees to be resourceful"* it was also argued, *"others may be reluctant to speak up for concern of punishment or degradation."* – Participant 10. This view recognizes this leader's efficiency in obtaining the maximum achievements from his employees through the strict implementation of the reward-punishment strategy. However, it was deemed that this approach was more beneficial to many lower-level executives than for the average subordinates.

As for the *idealized influence* sub-code, it was deemed that this manager lacked such a criterion. Instead, it was reported that the way he connected to everyone was far from the strategy of personal needs that the previous transformational leaders adopted. This one was completely pragmatic in his relationships. The following declaration pinpointed this idea *"I'd rather describe his relationships as pragmatic. I'm afraid this is the only term that comes to my mind and which best depicts how he connects to every one of us."* – Participant 10. While this description might sound quite negative at first, it holds many connotations regarding the performance norms established in the organization. This can be drawn from the same participant's statement, *"I'm not saying it's too bad to have such a kind of relationship with him,*

but you need to know that in order to get closer to this manager you'd better exert extra efforts and prove that you can meet agreed upon performance objectives." This performance-oriented leader strives to build his connections based on the degree of productivity and effectiveness. He sets high-performance standards that employees need to climb up to be close to him. This approach guarantees optimal overall organizational performance.

On the question of whether this type of leader adopts a one-to-one approach in their assessment of his staff, it was argued that he does not embrace an *individual consideration* strategy to provide performance feedback. His primary concern is to gauge the degree of the accomplishment of plans. This was pointed out in this quote "*We are evaluated on quarterly review basis. At the end of the day, what matters the most for him is the execution of work and the achievement of the preplanned objectives.*" – Participant 10. His major focus is achieving high work quality. It was held by the same respondent "*The quality of work and its timely achievability are the cornerstones of our performance evaluation. This is measured through regular review of our outcomes and feedback from our immediate supervisors.*" Employees' evaluation is a performance based process rather than individual consideration strategy. While such a method guarantees improved yield and higher throughput, it also denotes disinterest and indifference towards individual members' needs. This might generate contrasting behavior on the part of employees, which may compromise organizational performance.

Regarding the fourth sub-code *inspirational motivation*, the respondent's comments reiterated the materialistic and financial incentives that this leader offered to the employees who display higher proactivity and ability to think out of the box. Meanwhile, another proposed reward, embodied in getting "*a greater participation in the decision process,*" was offered as compensation for outstanding performance and productivity. This is further explained in this quote, "*More responsibility is always given to some of us as a reward for the competencies they've shown and the trust they've earned.*" – Participant 10. It is worth stressing that this manager's tough reward system is contingent upon the level of excellence and dedication to work. On that account, the impact of this style of management can be perceived from two opposite perspectives. The first impact was regarded as very positive as it vindicates the increasing performance. In contrast, the second account was considered inadmissible since it disregarded inspirational motivation that touches upon employees' souls and spirits rather than the mere contemporary financial compensations.

This comprehensive interview digs further into the transactional qualities that these leaders may possess or not. Accordingly, three codes were drawn from the respondent's

responses. These are *the contingent reward, active management by exception, and passive management by exception*. On that account, the informants' feedback on which measures their leaders may take against them if they underperform or do not adhere to their standards falls within the first code. The answers confirmed two classes of measures: corrective measures and swift punishments with the potential of holding others responsible for failure and underperformance versus considerate and supportive actions towards low achievements or work disorientation. Accordingly, the responses associated transactional and laissez-faire leaders with at least one aspect of the first category of measures. Such leaders either do not tolerate low-yielding employees who do not meet the standards of conduct and performance (transactional), or avoid bearing any responsibility for the malfunctioning of the organization (laissez-faire). Accordingly, two comments underline both types of leadership:

"Quick punishments are taken against some late or absent employees as he considers these to be intolerable examples of underperformance. At the same time, he doesn't lift a finger to make an end to the very frequent absences of some of the other employees and executives who are considered to be his inner circle." – Participant 9–

Confining performance measurement to the absenteeism and the impartiality in taking measures are the hallmarks of this manager with laissez-faire characteristics. All other aspects of employee appraisal are overlooked in flagrant demonstration of the inadequacy to manage and track achievements. One of the most integral roles of managers is to evaluate subordinates from different levels: workload, training, career development, etc.

"Unfortunately, this fact doesn't prevent him from holding many of us accountable for some actions or decisions that go beyond our competencies and duties." – Participant 7–

This second declaration referred to the leader who rejects taking responsibility for mismanagement or poor performance and rushes into blaming others and holding them accountable to avoid getting into trouble. The last instance of the severe measures is embodied in the transactional manager's quick rush to hold *"disciplinary meetings"* if underachievement resulting from breaching the conduct standards or integrity norms were detected. One participant clarified the arduous measures when he reported, *"I remember cases where severe measures such as administrative degradations or suspensions were taken. Regarding performance standards, displaying continuing underperformance and inefficiency to achieve objectives may deprive you of any reward or career promotion."*– Participant 10. In the meantime, transformational leaders were seen as compassionate managers who understand and explain the reasons for inefficiency and work on them to figure out remedies and foster performance together with their employees. Several observations have accounted for this:

"...he doesn't take tough or punishing measures. I made many mistakes and I committed many pitfalls, which definitely made my performance fluctuating- you know, up and down. What he did was more counselling and guiding rather than taking drastic measures against me. I felt he was trying to get closer from me to show me where I underperformed." – Participant 5–

Most of the characteristics depicted in the above statement describe the transformational approach in dealing with inconsistent performance. Thus, counseling and guiding low achievers are defining features of these leaders.

"I can't deny that I made a lot of stupid mistakes and incomplete tasks and he was always ready to explain the gap between what I did and it was expected from me. He gave me some examples of what should be fulfilled and he explained the reasons for my underperformance." – Participant 6–

Another important quality raised in this quote is the leading by example strategy that this manager applies to overcome all performance shortcomings. By modeling specific behaviors on how to solve problems and deal with intricacies, employees are put in authentic situations where they can see practical implementation and work on them instead of being given mere instructions without clear procedures to put them into practice. The last pattern of considerate measures was also attributed to the leader who *"doesn't wait for underperformance to happen or persist"* – Participant 9. This anticipatory strategy is formed within a bigger vision to reach a particular performance in collaboration with subordinates as this was mentioned by participant 9 *"He builds performance criteria with the help of employees and made them clear since the beginning of the academic year. This way, everything becomes clear to everyone."* Setting a clear vision and workable strategies to implement with employees are salient characteristics of transformational managers.

The retrieved input from the initial question on the leaders' style has been collated from subordinates' perspectives. The results disclosed two managers identified among the laissez-faire category. Items ascribed to these managers fall within a non-transactional style that displays managerial behaviors of indifference and avoidance. The concerned participants expressed quite negative views regarding their managers in plain terms. For instance, one interviewee stated, *"To be honest, it's difficult for me to provide a specific description of my supervisor. He barely communicates with us, and he seems detached from his surroundings. The last time I met him personally was a couple of months ago during a meeting."* Participant 7.

This leader does not care about communicating with employees, which denotes an avoidance strategy and isolation from the work setting. These traits and practices are typical to

the non-transactional leadership. Similar depictions were given by another follower *"I don't think he knows what he is doing... For me, his words do not match his actions... I think he has just been appointed there to watch us."* – Participant 8. While these inceptive descriptions provide patent indications of these executives' strategies, further sub-items vindicate both managers' laissez-faire features. In this regard, it was obvious that they fall short of the intellectual stimulation quality, as affirmed in this statement *"It's not easy for us to offer our ideas to come up with new suggestions...we hardly get to talk to him...he is constantly behind closed doors."* – Participant 7. There is no room for being inspired by a manager who does not even allow expressing ideas and closes all communication channels with the staff. In the same vein, another argument against one of these managers was advanced by participant 8 *"How would a manager like him expect his employees to think out of the box or do any effort to craft solutions to any problem."* In reference to the second sub-item, which is supposed to measure the extent to which these managers influence their employees, the comments confirmed the absence of any account of personal needs or any approach to motivate the members due to the non-existence of a clear strategy. Meanwhile, one participant highlighted the flagrant negligence of the different needs, such as *"some of us-like myself- are motivated by money (laughs)...others need a lot of support and encouragement from managers. Some other colleagues are waiting eagerly for the right opportunity to develop their situations."* – Participant 8. In default of any interest in these personal needs, such a leader would exert no influence.

In the same line, disclosures related to the third code individual consideration proved the non-existence of any subordinates' performance evaluation as noted by one participant *"I'm afraid to say that there is no performance evaluation whatsoever."* – Participant 7. This opinion was validated by another employee who indicated that his manager is keen on measuring attendance only and that no other achievement appraisal was undertaken. *"Measuring attendance is the only evaluation that I know of in this organization. We are given constant feedback concerning the number of days we checked-in late and our absenteeism frequency. It doesn't make sense to me."* – Participant 8. It is worth comparing the performance assessment experiences carried out under the three types of managers, which disclosed noticeable discrepancies in leaders' practices and employees' reactions. In this respect, to be subjected to the assessment process with transformational managers has been vindicated as an insightful and enriching experience. It was maintained that it is mostly carried out with the objective to help individual employees and teams to explore the areas of deficiency and incompetence in a friendly atmosphere. What is more, self-development and work adjustment

constitute the cornerstones of such evaluations. In the transactional context, gauging employees is a pure performance-based procedure concerned mostly with productivity level and the objectives' achievement. With this management pattern, higher performance is rewarded, whereas underachievement is punished or at least underestimated.

Interpersonal relationships are determined by adhering to higher standards rather than individual needs. On another note, it was observed that laissez-faire or non-transactional patterns avoid any employees' performance assessment. This generated frustration among some employees who consider it an unfair practice, as one participant reported it.

"What I find really disappointing is that no matter how hard-working and active one is, he ends up with the same position and income of those incompetent employees. This is quite depressing for me." – Participant 7. For this employee, performance measurement could be the leverage of his professional career. It could be a way to distinguish competent from incompetent personnel. Having stated that, another issue was raised by the same participant who referred to the 'obvious favoritism' with which his executive treats different employees, and that fosters the feeling of dissatisfaction. Concerning *Inspirational motivation*, critical participant gave comments regarding their leaders' failure to provide any form of inspiration or motivation 7 *"In the absence of interactive management that cares about the staff and communicates easily with them; there will be no inspiration or motivation at all."* With the reported lack of a caring manager who would interact with everyone and inspire him or her with every possible tool, it was deemed that there would be no proactivity or dynamism at work. Similarly, it was argued that *"...we receive no encouragement, and there is no communication or freedom to come up with new things."* – Participant 8. The above views endeavor to convey that in a work environment where leaders are utterly absent and avoid taking charge of their employees, the four properties of idealized influence, inspirational motivation, intellectual stimulation, and individual consideration will not exist.

- **Sub-theme 4: Ramifications of the leaders' practices on job satisfaction and commitment, and organizational performance**

Illuminating insight on the effect of the prevalent leadership style on job satisfaction, organizational commitment, and organizational performance was drawn from the respondents' exposure. Strong expressions of satisfaction and dissatisfaction were reported by all participants regarding their leaders' styles and how they affect university culture and performance. By way of illustration, five interviewees depicted their leaders' influence on them as follows:

"I believe that the style of my leader works well for my colleagues and me." Participant 5–

"This vision makes me very satisfied and committed to the team and organization. I feel highly engaged in what I do and ready to work with everyone." –Participant 6–

"This positive culture fosters everyone's satisfaction and commitment to the leadership vision." –Participant 9–

"The manager has stepped back and let chaos dominate the place. Work is not done as it should be, as no one has any longer been worrying about being supervised or evaluated on their achievements... For me, I just don't belong in here anymore." –Participant 7–

"Employees are left to their fate in this university. We make all decisions and strive to solve ongoing problems to get work accomplished. There is an inherent feeling of detachment from the management and the organization. All this generates a feeling of dissatisfaction among the majority of us." –Participant 8–

The subordinates who work under transformational leaders could not help but express their total fate in their managers and utter satisfaction with how they are led. They show great enthusiasm and readiness to invest themselves and give their best to help develop their university. Remarks like these reflect how committed these participants are to their executives. Meanwhile, they also disclose contentment and commitment to their organizational culture. This was reported in statements like this one *"Certainly it does. Everything revolves around how subordinates are treated and how the work is done. It's just like at home- when the father ensures stable and reassuring household conditions, you will see a happy and dedicated family."* –Participant 5. This informant has provided a family-like analogy to the culture of his university. Such a depiction reflects how satisfied and committed he is to the work setting and the manager. In the same vein, the subsequent interviewee 6 characterized the work environment as having *"a culture of inspiration where everyone has a wide autonomy to act and think within their teams."* These favorable conditions caused a substantial impact on how he perceived his position in the organization and the way he should fulfill his duties. Correspondingly, participant 9 depicted his university as a culture *"which boosts our trust and loyalty."* He maintained that the work conditions and managers' practices motivate everyone to do their best and seek higher performance.

On the other hand, negative feedback on the dominant culture and leadership practices were extracted from participants 7 and 8. Accordingly, the first comment described culture as *"chaotic"* where disorder and disorganization predominate all organizational aspects. Similarly, the second description divulged *"an inherent feeling of detachment from the management and*

the organization" that haunted almost everyone in his university. For both universities, employees expressed the lack of belonging and their complete dissatisfaction and discontentment with their leaders. They blame them for the inadequate work conditions and the low performance in these universities. This was strikingly obvious in one remark:

"I can guarantee that half of my colleagues think of getting transferred from this university as they are feed up with the lack of leadership competence." –Participant 8 –

As far as the transactional leader is concerned, he was no exception despite the slight distinction he can bring about to performance. Therefore, the work environment he handed was delineated to be *"very demanding"* and generates *"temporary satisfaction"* since it is built on a *"rewards and punishment"* system. According to this participant, he does not *"feel safe in such unstable environment,"* where a high reward is contingent upon constant and steady performance. He made this quite clear in this quote, *"...an employee feels satisfied with the financial incentives as long as they exist; once their performance drops, rewards vanish as well as their satisfaction."* There was a straightforward association between transformational leadership, high job satisfaction, and strong and sustainable employees' commitment to their leaders' vision throughout all the previous answers. It was also established that a transformational leader could build and maintain a very appropriate organizational culture that considers individual needs and organizational performance and productivity. Three participants (i.e., 5, 6 and 9) were openly content to work in their actual universities. In contrast, job dissatisfaction and the lack of commitment were linked to the laissez-faire and transactional leadership types. What is more, heavy critics regarding the nature of the organizational culture in three universities were addressed to their managers as previously reported by participants 7, 8, and 10.

3.3 Emergent Themes: Total Quality Management (TQM)

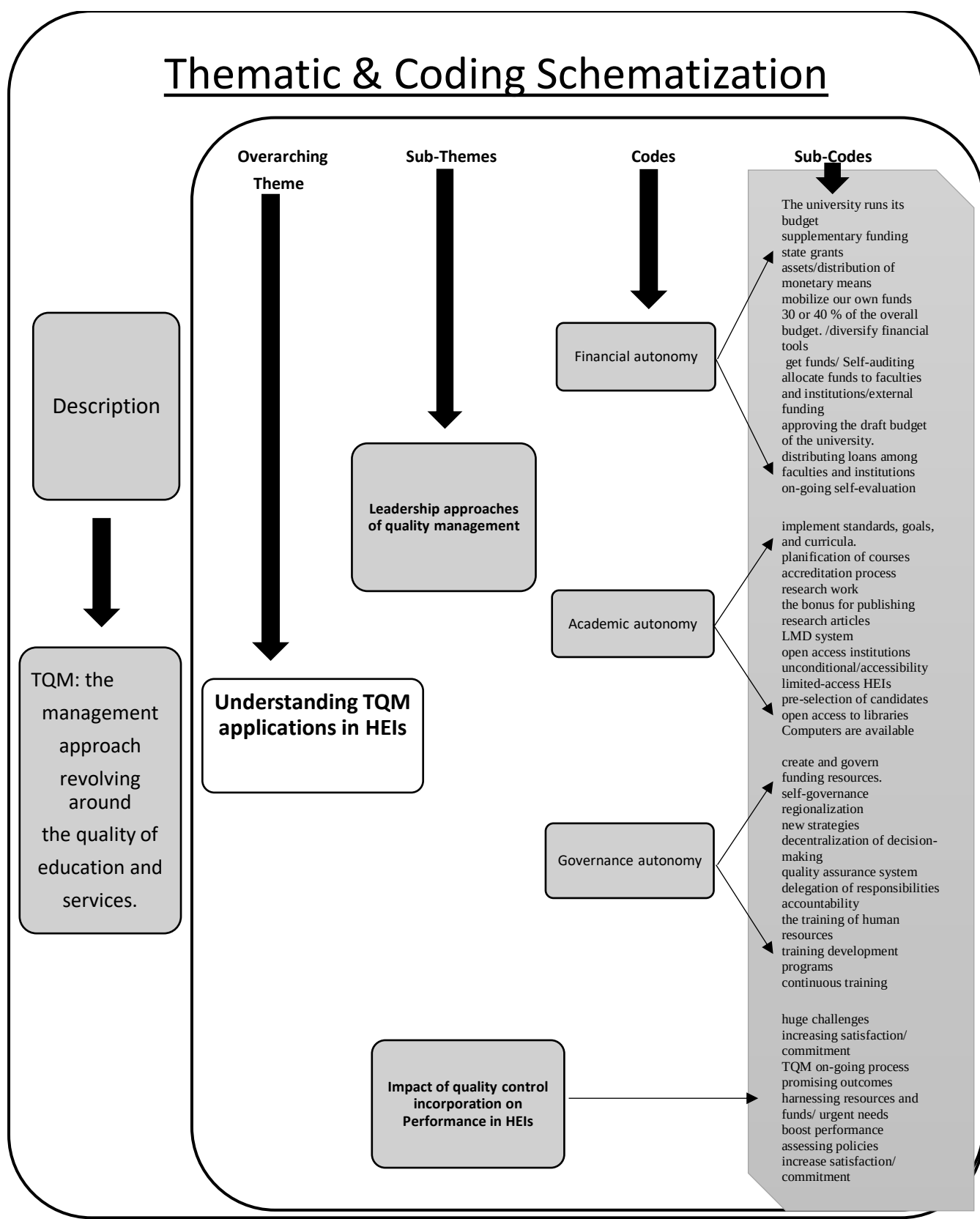


Figure 35: Thematic & Coding Schematization of Total Quality Management

The third section of the interview ponders on total quality management integration and implementation in the study universities. The thematic segmentation pinpointed one overarching theme, which is *understanding TQM applications in HEIs*. On that account, a more concentrated analysis of the different applications of TQM in higher educational institutions unveiled two significant sub-themes. The first was labeled *leadership approaches to quality management*. This sub-cluster was subdivided into three codes: (1) *financial autonomy*, (2) *academic autonomy*, and (3) *governance autonomy*. The second sub-theme has been probed through the dissection of *the impact of quality control incorporation on performance in HEIs*. In the meantime, wide-ranging sub-codes relative to all the previous primary and sub-components were identified in the applicable transcripts' coding. By way of example, the sub-items that were affiliated to the code governance autonomy include self-governance, regionalization, new strategies, decision-making decentralization, delegation of responsibilities, accountability, etc. It is worth mentioning that the input on TQM was retrieved from the top executives of the study universities.

▪ **Overarching Theme One: Understanding TQM Applications in HEIs**

The findings from the respondents' disclosures have shown a massive grasp of the TQM applications in the universities. This finds justification in the national reform's incorporation of the three applications of autonomy and the genuine execution of these implements by Moroccan universities as all the interviewees reported it. Accordingly, in response to the principal question regarding how the universities operate within the TQM financial, administrative, and academic applications, all the participants accounted for them as leadership approaches of quality management.

Sub-theme 1: leadership approaches to quality management

The most important observation centers around the overall confirmation of the current execution of the three requirements in conformity with the national charter's directives. In this respect, three participants (i.e., 11, 13, and 15) referred to law 01-00 that provides the regulatory and organizational framework for tertiary education in Morocco. Thus, participant 11 reported that:

"According to the provisions of law 01-00, universities are public institutions that enjoy financial, administrative, and academic independence." Similarly, another informant confirmed, *"The university operates under law 01-00, which is the quality assurance system's constitutive act. Thus, there is an extended autonomy in the management and assessment of educational, research, administrative, and financial aspects."*-Participant13.

This awareness of the regulatory framework underlying the three sub-codes of the first unit has been further accounted for by participant 15, who maintained

"Law 01-00 lays down the fundamental organization of how to implement financial, administrative, and academic applications of university autonomy. Therefore, the university council undertaken measures related to planning pedagogical and research issues, human capital, and financing schemes of internal quality assurance."

Integral to the managers' executive powers, TQM adoption and execution should be given high priority during the scheduling of important schemes and programs. Top executives are granted greater discretion to make financial, academic, and administrative decisions along with the university councils. What is more, law 01-00 is the governing document and basic act that entitles them to establish and operationalize different university governance mechanisms and assessment mechanisms. The extended authorities that top managers were given were particularly highlighted by participant 12, who contended that *"The new strategic vision and the new governance of public higher education aim to boost the university's autonomy by focusing on legal status as well as financial, administrative, and academic aspects of independence. Having stated that, top executives enjoy the freedom to create and govern various mechanisms to diversify and maintain funding resources."* –Participant 12. Part of these mechanisms are embodied in creating and executing an internal quality assurance system to oversee and assist the different projects and programs. In the question of financial management, the respondents' returns revolved around three sub-codes: state funds management, external resources upgrade, and internal quality assurance establishment. In this regard, it was asserted that *"the university runs its budget that comes from two major sources: supplementary funding and state grants."* –Participant 11. The university general council chaired by the university president discusses financial matters and related decisions. Thus, universities run and distribute state and external funds. The state remains the primary provider of funds as it has been suggested in the strategic vision 2015-2030 reform. In the same vein, another statement supporting the university's role in monitoring state funds was given *"we handle human resources and run and broaden funding instruments. According to law 01-00, the university president has financial authorities that permit to allocate funds to faculties and institutions according to the number of enrolled students and fields of specialization and training."* –Participant 14. Although public higher education in Morocco is still completely free of charge, a growing number of universities have started to charge some categories of students who pursue their master's and doctoral studies some fees. Meanwhile, financing different faculties depend on the number of enrolled students. However, the state provides higher funding to limited access

to HEIs. *"Concerning the allocation of resources, an important example of the financial decisions lies in the possibility of distributing loans among faculties and institutions"* – Participant 15. This comment refers to the culture of entrepreneurship that promotes the business-like system at Moroccan universities. On that account, one aspect of this ecosystem innovation is to enable universities to take loans and run them to improve the quality of education. On the subject of how they look for external funds and the various resources of financing universities, the comments revealed multiple instances of the extended autonomy to manage and diversify the. Thus, participant 11 asserted, *"the university has extended freedom to manage its human resources, financial allocations, and varying assets it possesses. The university council makes decisions related to these issues. They involve the training of human resources and the distribution of monetary means."* –Participant 11. What is more, another interviewee held that *"it is true that the state grants constitute the primary sources for the university's annual budget, yet we have enough freedom to mobilize our funds."* –Participant 13. These funds can be derived from activities that fall within the provision of basic services such as fees generated from expert training and continuing education programs. Also, it can be drawn from the received gifts from other organizations. Besides, many universities possess different assets that produce extra funds. Similarly, participant 14 provided the same view when he argued, *"our university manages the state funds and looks for external funds to enlarge its budget from external bodies and organizations to meet the growing needs."* –Participant 14. The growing number of enrolled students can cause heavy financial burdens on the increasing funds coming from the state. Therefore, it has been planned to give additional authorities to the universities to broaden their revenues to meet their fast growth. Some of the informants went into details concerning the sources of external funds. By way of illustration, the same participant declared, *"significant external funding comes from providing paid services in the form of training experts and human capital in different domains as well as carrying out research work for the benefits of individual professionals or particular institutions."* It was observed that the additional funding tools remain very limited and take place occasionally. Partnerships with the private sector that can generate more funds require active governance. Another participant provided a more extensive statement of the varying options to get extra funding: *"we plan to diversify our financial tools and get funds from grants other than those provided by the state such as support that comes from national and international cooperation projects and allowances generated from research work and partnerships with the private sector."* – Participant 16. The major objective of many executives was reportedly increasing revenues

from external resources. In this regard, participant 13 fixed an objective to upgrade these financial instruments to 30 or 40 % of the overall budget.

The last sub-code concerns the implementation of the quality assurance system within the study universities. All participants were aware of the necessity to have an internal auditing scheme to assess all the financial operations, academic and scientific research, and human resources management. The significance of the implementation of such a system was summed up in one respondent's statement *"the implementation of a well-planned quality assurance system guarantees a better delegation of responsibilities and accountability, which will certainly bear upon the overall performance positively."* –Participant 12. This participant established a tight association between organizational performance and the quality management component.

With reference to the second sub-theme, academic autonomy, most replies emphasized curricula, training programs development, and the scientific research upgrade. Participant 11, for example, highlighted the role of the university in elaborating curricula and fostering new training schemes as quoted in this statement: *"the university contributes to the dissemination of regularly updated course curricula while taking into account students' and markets' needs. In addition, it proposes new courses and guides in terms of accrediting programs. Additionally, it takes pedagogical decisions related to boosting and changing the courses and training programs."* –Participant 11. Wide-ranging academic implementations were underscored in the above declaration, including updating curricula, suggesting training, and pedagogical programs for accreditation by different external bodies. What is more, there was an important reference to meeting students and market's needs, which are at the heart of the reforms, especially in terms of adopting and creating courses and modules that fit the job market. Another participant pinpointed the university autonomy to *"create and run the internal assessment of programs, curriculum, continuous training mainly in the new technologies, etc."* –Participant 12.

Meanwhile, another strategic role that universities ensure is embodied in the implementation of national standards. In this respect, an important observation was made to confirm, *"the university has the responsibility of designing and implementing standards, goals, and curricula. For different qualifications, well-defined national educational standards are outlined. They shed light on how teaching and lecturing should take place as well as the general goals and methods for the accreditation of different courses."* –Participant 15. What is more, respondent 13 sheds light on the major manifestations of the reform as embodied in adopting the LMD system, which refers to bachelors, masters, and doctorate system. Therefore, he maintained, *"The integral part of this system is the module that consists of one or more*

components given in one or two chosen languages. For the completion of a module, lecturing, tutoring, and practical courses are planned during a semester." –Participant 13. This informant's delineation of the LMD system entails the freedom of universities managing the modularized system and planning courses and exams. Most respondents tackled the academic and pedagogical issues in view of improving the quality of education and services. Accordingly, they were aware of their responsibilities in making decisions that would help in boosting scientific research. This was obvious in the following quote *"the university gives high regard to research work conducted by lecturers and Ph.D. students. This is evident in the provision of the bonus for publishing research articles in indexed journals. Besides, devoting financial support for participating in national and international conferences is another embodiment of assisting researchers."* –Participant 16.

Despite the huge challenges that encounter scientific research in Morocco to find appropriate financing, efforts were being made to change the status quo and create scholarships of excellence for non-employed students. However, there is roughly a total absence of the private sector in terms of sponsoring scientific research or providing assistance and expertise to academics.

With regard to the third code *governance autonomy*, the returns from all the respondents brought forth sub-codes such as decentralization, human resources management, and the students-related services. In this line, an important statement regarding the new strategic vision of universities' self-governance revealed the significance of decentralizing the decision-making process. Furthermore, universities' self-governance within the new vision of regionalization ensures avoiding centralizing decision-making and opening new horizons to larger universities' independence. Indeed, self-governance strategy is a major pillar of the advanced regionalization that denotes a greater autonomy in managing all university resources depending on each institution's specific needs. This means further decentralization of decision-making, which intends to respond to each high educational institution's urgent and customized needs. Another manager placed students' needs at the center of the university's governance strategy. He accounted for the *"Students can choose to further their studies in humanities, legal and economics, or social and science studies as long as they hold a science baccalaureate."* – Participant 16. For him, this student-based strategy guarantees wise governance of students' requirements. Managerial approaches are more oriented to student-based to meet their expectations. These range from academic needs, such as those mentioned in the comment, to the needy students' financial support.

- **Sub-theme 2: The Impact of Quality Control on Performance in HEIs.**

The comments' integrality has provided positive regard concerning the embracing and use of the TQM constituents in the study universities. The first comment in favor of implementing this method was given by participant 15, who stated, *"The implementation of TQM is an on-going process that offers promising outcomes if the required resources and funds are harnessed and governed wisely. The TQM strategy's ultimate objective is to boost universities' performance and meet the urgent needs of the youth and the job market."* –Participant 15. This respondent recognizes the importance of TQM adoption and the potential outcomes it can lead to. Meanwhile, he linked positive results with the mobilization of the necessary human and financial capital. What is more, TQM's success was also related to the good governance of these resources. Another manager (i.e., participant 16) considered further the benefits of using TQM *"We are still in the process of executing and assessing financial, academic, and governance policies aiming at achieving extended autonomy within public universities. Meanwhile, having powers to make decisions at these three levels brings about huge challenges and increases satisfaction and commitment among university members, which will urge them to improve their performance as they feel involved in this process."* –Participant 16.

In all, TQM implementation has received unanimous support from the respondents. They demonstrated a broad awareness of its benefits on boosting financial, academic, and administrative applications. They deemed that this approach's systematic adoption could foster employees' satisfaction and commitment if the required tools and resources were harnessed. This would reflect on the general achievement of the university and affect organizational performance positively. TQM, considered altogether, is a complete package that necessitates collective and synchronous efforts on leaders, employees, and different stakeholders to establish and maintain quality education and quality service at Moroccan universities.

3.4 Emergent Themes: Balanced Scorecard

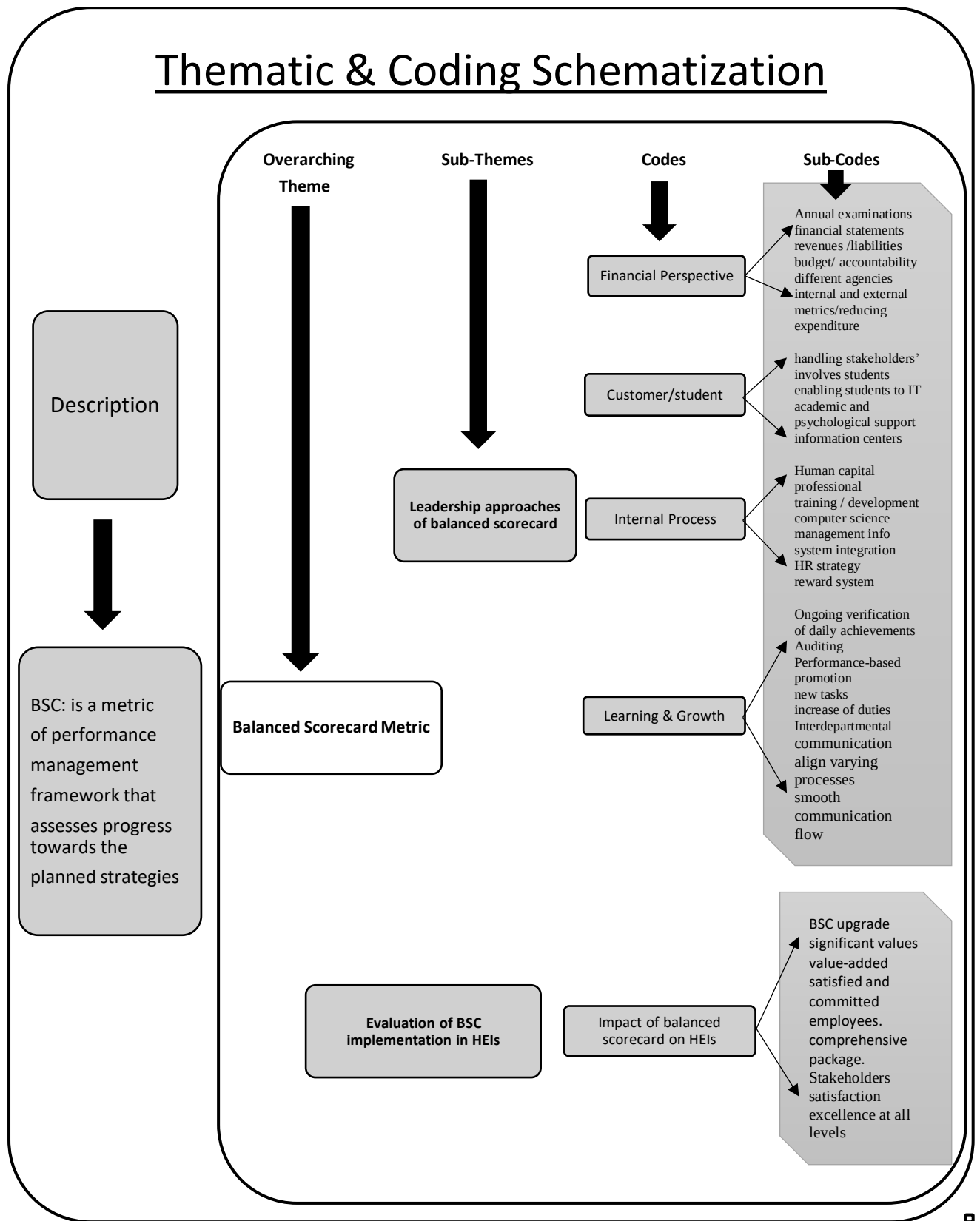


Figure 36: Thematic & Coding Schematization of Balanced Scorecard

The fourth and last section of the interview scrutinizes the insertion and carrying into effect of the balanced scorecard in higher education. Depth analysis casts light on the thematic mapping of the relevant transcripts (see figure 36). Therefore, the major theme that was labeled *a balanced scorecard metric* was further partitioned into two meaningful sub-theme: (1) *leadership approaches of the balanced scorecard*, and (2) *evaluation of BSC implementation in HEIs*. What is more, four codes formed the first sub-theme. These are (1) *financial perspective*, (2) *customer perspective*, (3) *internal process*, and (4) *learning and growth perspective*. Meanwhile, the second sub-theme comprises one code, which is *the impact of BSC on higher educational institutions*. A multitude of sub-codes was identified with the above codes. As an illustration, the financial perspective code was assigned sub-items such as annual examinations, financial statements, revenues and liabilities budget/transparency, accountability, different agencies, internal and external metrics/reducing, etc. Noteworthy, top executives of the study universities were surveyed on the BSC issues.

- **Overarching Theme One: Balanced Scorecard Metric**

- In reacting to the question of how universities operate within the balanced scorecard's four applications of financial, customer, internal process, and learning and growth perspectives, all the participants attested in favor of its usage in their organizations. Having observed that, it is important to distinguish between the managers who authenticated the execution of BSC as a programmed package of performance measurement and those who confirmed its execution as part of their routine of daily duties and responsibilities. In this context, participant 17 shed light on this variation when he stated, *"I think that the difference with the balanced scorecard is that it places much emphasis on the implementation and assessment of each of these elements within a systematic package and predetermined objectives and time line."* –Participant 17. It is important to mention that this participant had recognized that he had not been quite familiar with this method and *"... used to have a kind of blurry picture concerning this method of performance assessment."* BSC was perceived to be a new approach and instrument in the field of education in Morocco. This may account for why some managers preferred to tackle it from the angle of the routine activities and tasks they undertake rather than consider it a set of measures requiring preparation, training, and a specific budget. On that account, participant 18 deemed all the activities associated with BSC as integral components of his obligations as a manager. *"As a manager of a public institution, I deal with a plenty of issues related to the financial, customer, internal process, and learning and growth perspectives. These duties and responsibilities*

constitute important parts of the internal and external management that we share with the state." –Participant 18. This informant ascribed the BSC's implementation to both the university presidency and the ministry of higher education. This was made clear when he referred to the internal and external management forces that are embodied in the decisions and actions taken within the organization and the outside factors and decisions made by external entities beyond the management control such as the external governing bodies. Meanwhile, evidence from the above feedback shows that this executive associated BSC with everyday practices rather than a set of measures taken during a specific period and with preset resources and measurable objectives. Thus, he perceived it as a routine procedure that constitutes an integral part of his functions. Meanwhile, another respondent held in high esteem the effectiveness of BSC in dealing with the integrality of university management and performance. Therefore, he argued, *"The emerging challenges associated with management requires the adoption of an effective method to handle the intrinsic and extrinsic factors affecting various aspects of higher education performance. Therefore, any tool that can treat financial, internal process and learning and growth drivers' issues efficiently, such as BSC, should be implemented systematically."* A shared point with the forgoing interviewee was raised in his statement and touched upon the intrinsic and extrinsic factors that play a substantial role in applying the four components of the BSC. Thus, an implicit recognition of the leadership's inability to handle all extrinsic intervening antecedents is beyond their jurisdictions. Correspondingly, participant 22 advocated the balanced scorecard's implementation strongly and listed its benefits on Moroccan tertiary education. This was made quite explicit when it was advanced that *"I couldn't agree more with the necessity of adopting the balanced scorecard in Moroccan universities. Among the benefits of implementing BSC reducing expenditures, saving time, boosting internal transactions and daily operations are particularly relevant to leverage performance in any organization. These assets contribute to upgrading performance in your organization."* –Participant 22. Overall, despite the varying degrees of understanding and implementing BSC, all participants supported its usage and acknowledged its utility openly in assessing and improving performance in their universities.

▪ **Sub-theme 1: Leadership Approaches of BSC**

Leaders assume many responsibilities and adopt diverse approaches while carrying out the BSC implements in their organizations. As previously stated, these include making decisions and managing issues related to the financial, customer, internal process, and learning and growth perspectives. Regarding *the financial perspective sub-item*, it triggered many interesting reactions on the part of the surveyed executives. Thus, its significance was summed up in the following quote *"I think that BSC can upgrade financial governance within our institution and bring forth significant values such as excellence and dedication to work."* – Participant 20. Besides, participant 18 provided the information that *"At the level of financial management, the state takes charge of auditing and undertaking a priori control of the faculty of science and technology's financial position. Also, external financial audits conduct annual examinations of the financial statements of the institution. Therefore, our budget must strike a balance between revenues and liabilities."* This comment accounts for the relative freedom given to universities in terms of auditing their financial outcomes. The state keeps tight supervision of financial resources and their management through the governing bodies that exercise regular monetary auditing plans and outcomes. Moroccan universities are accountable to the state for their monetary strategies. Another executive brought forth an alternative observation when he held that *"There are two aspects of performance measurement in this faculty. The first one is the internal quality assurance system, which evaluates financial affairs regularly. The second instrument is the external assessment undertaken by the university and different agencies of the state. So, both internal and external metrics of financial appraisal are used."* – Participant 19. The notions of internal and external quality control surface in this comment. Both levels target the monitoring and appraisal of all aspects of the university, including administrative, financial, and academic governance. In the meantime, it is worthy elucidating that each of these evaluative instruments has its implementation mechanisms that serve different purposes of performance measurement. For instance, a pattern of internal assessment could seek to gauge and estimate expenditures related to a specific project. In contrast, external auditing could target to weigh the university budget deficit over a while. Participant 21 argued, *"For the implementation of any method, program, or strategy that requires important funding, the faculty council decides to allocate the needed sum of money from its budget or external sources. For the finance of the BSC plan, the faculty can establish partnerships with experts of this method to help to implement it with lower costs."* This respondent considered BSC as a project that requires a sufficient budget that could be drawn either from state funds or from national or international partnerships. Receiving external

financial support for BSC implementation could also be framed within the international agreements that the ministry establish with different countries or organizations.

In reference to *the second sub-code students/customers' needs perspective*, it was contended, *"Regarding students' needs, the new governance strategy articulates the importance of handling stakeholders' needs, particularly those of our students. Therefore, part of my duty is to form a management strategy that takes into account students' expectations. On that account, the administration involves students in the decision-making process through their elected representatives."* –Participant 18. This answer articulated the students' right of being heard by the university management. Thus, the students' inclusion through their elected representatives in academic projects and student-related services and decisions was deemed very important. Also, manager 19 prioritized students' needs. He maintained, *"Some of the most urgent needs that the faculty has been able to meet are enabling students to IT through the generalization of the free-access to the rooms equipped with computers to everyone. Also, academic and psychological support is provided at the information centers that the institution establishes at the beginning of the academic year and during the exam periods."* –Participant 19. Two aspects of students' support were raised in this reply: students' easy access to IT and their psychological assistance. The general orientation among universities is to create centers that provide counseling and follow-through services to students. In addition, streamlining access to the new technologies of communication is another aspect of this support, according to this interviewee. Furthermore, participant 20, who declared, *«Concerning communication with students, the full set of information on the institution and its services are given to all students, underlined communication with students. For instance, prior to the faculty's enrollment, prospective students are targeted and informed about the institution through the conduct of campaigns in high schools and social media. Finally, we are working on a better orientation and redirection of graduates towards the job market requirements. Our institution takes students' demands and exigencies very seriously."* –Participant 20. A major manifestation of meeting students' needs is the increasing openness of universities on high schools to prepare students' transition from secondary level to higher education easier. Instances of the guidance and assistance efforts are the forums of orientation and open days that many HEIs initiate, especially at the academic year's outset.

Students' satisfaction was highlighted by participant 21, who reported that *"to satisfy different stakeholders particularly students, the provision of quality education and services are at the heart of the profound structural reforms that have been launched since the turn of the millennium."* Meeting the students' growing expectation entails involving them in decision-

making process and empower them through streamlining their access to the new technologies. These measures would provide higher quality education and services and enable stakeholders to graduate from universities as highly qualified laureates for the job market.

Concerning *the third sub-code internal process perspective*, it delves into the management of interdepartmental administrative and communicative procedures as well as office related processes. In this respect, it was maintained, *"our HR strategy entails two major schemes of staff development and operation/service development for the sake of ensuring a consistent environment for personnel and the work proceedings."* –Participant 19. Clearly, this comprehensive strategy aims at upgrading office work related proceedings as well as boosting the staff skills in carrying them out. Meanwhile, another respondent delineated that for the adequate development of internal processes there should be a systematic integration of an efficient information system *"we strive to develop internal processes by integrating a management information system that covers all the institution's services mainly departments, human resources, libraries, etc. The integration of such comprehensive information system seeks to modernize our administration, teaching, and research methods. What is more, this system will help streamlining interdepartmental processes and operations."* –Participant 18. Another leader who contended that «auditing the competencies of the personnel and cross-checking the efficiency of daily operations and procedures take place annually made more focus on the measurement of employees' skills with procedural rules and actions. *A performance-based system is applied to both employees and programs."* –Participant 20. This manager provides financial rewards to excelling employees who achieve their objectives. He also associates professional upgrade with job fulfillment. This is in line with his strategy that endorses the continuity of programs based on their outcomes. Regarding participant 21, he brought to focus the multiple tasks performed by all the staff due to the enlargement of his university and the increase of the workload. *"...the faculty has had to perform new tasks in addition to its prior responsibilities. This is due to the expansion of the institution and the increase of duties. Therefore, managers have made more efforts to simplify the new required activities and operations to respond to all the staff interrogations. This has been made undertaken with the collaboration of the heads of departments and with the inclusion of employees. My duty is to supervise the normal handling of routine procedures and administrative processes that ensure the normal progress of work."* –Participant 21. Finally, the last respondent related internal processes to interdepartmental communication efficiency. His statement made it quite evident *"Regarding the internal processes and interdepartmental communication efficacy, they are ensured through an integrated information system that*

permits to coordinate different tasks and activities. The objective is to align varying processes and avoid complexities and overlaps between departments. This smooth communication flow between all departments is fostered by holding regular meetings." –Participant 22. The investment in the installation of an integrated information system changed the communication flow between departments. Collaboration between all departments and service was fostered, and bureaucracies were made less complex.

The fourth and last sub-code concerns *the learning and growth perspective*. This sub-item was interpreted through the implementation of programs of continuing professional training and development. On that account, one manager gave high priority to developing learning and growth among his university members. Thus, he reported, *"For that reason, regular professional training workshops and seminars are scheduled annually for many employees. I also encourage my staff to complete their study to advance in their career."* –Participant 18. Another informant provided an extensive account of how he intends to upgrade human capital within his university. Accordingly, he maintained, *"Human capital is an integral leverage of sound governance. Therefore, programs on continuing professional training and development are the core of our strategy to improve human resources competencies. Meanwhile, I should draw your attention to the fact that continuing training isn't organized formally. This means that only a restricted number of lecturers and researchers are offered such training opportunity by either the university or the ministry. For instance, improvement sabbatical can be offered to lecturers with no less than seven years in their post. Training adheres to predetermined conditions that concern individual researchers. Yet, some training courses such as computer science are available on campus."* –Participant 22. Taking part in continuing professional training is the foundation of upgrading human capital. Yet, there should be more programs to encompass a larger number of employees. This entails more budgets and schemes to keep employees updated and knowledgeable of their areas of specialization.

- **Sub-theme 2: Evaluation of BSC Implementation in HEIs**

- Feedback on the impact of the balanced scorecard on HEIs has validated BSC's positive effect on the study universities' performance. In this respect, it was appraised as very practical and useful in terms of the operationalization and evaluation of the four quadrants as previously accounted for and substantiated in the first sub-theme analysis. Other disclosures pointed out other organizational aspects that BSC helps to upgrade. On that account, one participant held that *"measuring our institution's performance increases the transparency of financial management and consolidates important practices such as accountability and self-*

governance." –Participant 18. Organizational performance measurement is crucial to establishing effective practices related to the limpidity of how financial decisions were made and the institutionalization of an internal culture where responsibility is linked to accountability. Meanwhile, another manager sheds light on other features contributing to the efficient execution of BSC *"Ongoing verification and checking various departments' heads undertake daily achievements, processes, and operations. Setting a reward system, stressing continuous learning and development, and initiating an ongoing dialogue will ensure an appropriate environment for implementing the BSC."* –Participant 19. This statement demarcates many criteria that fall within the BSC scope of analysis and assessment. These are embodied in the quality control of the effectiveness and flexibility of the administrative operations and processes. Meanwhile, adopting a communicative approach to interact and solve daily intricacies has been proved as an impactful strategy for orienting employees towards excellence. Participant 20 indicated the beneficial and favorable contributions of BSC to enhancing the quality of education in this university. In this regard, he argued, *"I think that BSC can upgrade financial governance within our institution and bring forth significant values such as excellence and dedication to work."* –Participant 20. Such an explicit recognition of the positive impact of BSC reflects in the financial governance of the university. Respondent 21 approached BSC positive effects from stakeholders' satisfaction and commitment. Thus, he contended, *"BSC is a comprehensive package covering all the primary factors that determine and affect work conditions. For this reason, I think that a well-planned implementation of this measurement instrument will certainly generate satisfaction from employees, students, and the rest of the stakeholders. This will undoubtedly prompt them to show high commitment to their institution. This positive effect will reflect on achieving excellence at all levels."* –Participant 21. Achieving stakeholders and employees' satisfaction is an important reason for BSC adoption. The intended results are embodied in optimum commitment and higher performance.

4 Summary of the Semi-Interview findings

The transcripts' integrality has laid bare large analytical and interpretational segments on account of the four sections of the semi-structured survey interview. Therefore, the dissection of the first overarching theme, Organizational culture, has been examining three emergent sub-themes. These are (1) *the characterization of the work culture*, (2) *leadership Practices affecting organizational culture*, and (3) *work environment ramifications on HEIs performance*. These sub-clusters comprise meaningful codes as follows: the first five codes, which are *clan pattern*, *adhocracy pattern*, *hierarchy pattern*, *market pattern*, and *miscellaneous/mixed patterns*, bear upon the first sub-theme. The second sub-theme brings into focus the four ensuing codes: (1) *lefollowingformality practices*, (2) *leaders' communication practices*, (3) *leaders' innovation and motivation practices*, (4) and *leaders' governance practices*. Wide-ranging sub-codes help to interpret further to interpret broadly, all participants' analogous returns confirmed the satisfactory work conditions and the higher employees' commitment, which positively affects organizational performance.

With regard to the second section it probes into the implications of the various styles of leadership on organizational culture and the impact they have on employees' commitment and satisfaction in their universities. Accordingly, six subordinates have been interrogated by dint of eleven open-ended questions. The schematization and the codification and sub-codification processes have yielded one overriding theme that involves four sub-themes. These are

1. *Transformational leadership characterization in your organization,*
2. *Transformational leadership characterization in your organization,*
3. *Laissez-faire leadership in your organization, and the ramifications of your leaders' practices on job satisfaction and commitment, and organizational performance.*

In-depth investigation of the sub-themes provided codes that are more detailed partitioned as follows: (a) *idealized influence*, (b) *inspirational motivation*, (c) *intellectual stimulation*, and (d) *individual consideration* were ascribed to the first sub-theme. Regarding transactional pattern, it consists of three codes: (a) *contingent reward*, (b) *active management by exception*, and (c) *passive management by exception*. The outcomes revealed a general satisfaction in working with transformational leaders and a strong commitment to their visions. Moreover, all participants working under this type of leaders confirm the positive and favorable organizational culture that their leaders establish in their universities. Meanwhile, negative reports regarding the laissez-faire type of management have shown a patent frustration of the managers' practices and the lack of actions, which negatively affects organizational

performance. The transactional model has generated perplexing reactions on the part of subordinates. Thus, on the positive side, it boosts goals achievement and result orientation, which fosters organizational performance. On the downside, a higher performance comes at the expense of employees' satisfaction and commitment, as they feel treated with a reward-punishment system. Therefore, transformational leaders were associated with appropriate culture and employees' satisfaction and commitment. However, job dissatisfaction and the absence of commitment were linked to laissez-faire and transactional managerial behaviors and practices.

As concerns the third section, the overarching theme understanding TQM application in HEIs was broken down into two sub-clusters *leadership approaches of quality management and the impact of quality control incorporation on performance in HEIs*. Sub-codes annexed to the first sub-theme are (1) *financial autonomy*, (2) *academic autonomy*, and (3) *governance autonomy*. In the meantime, a significant number of sub-codes served to depict the predetermined codes. Important results have been drawn from the abundant responses. Thus, TQM would significantly leverage employees' satisfaction and commitment if the required resources were harnessed.

The last section ponders on the balanced scorecard application in higher education. The thematic mapping disclosed one central theme labeled a balanced scorecard metric and two sub-themes: (1) *leadership approaches of the balanced scorecard* and (2) *evaluation of BSC implementation in HEIs*. Furthermore, four codes formed the first sub-theme. These are (1) *financial perspective*, (2) *customer perspective*, (3) *internal process*, and (4) *learning and growth perspective*. Additionally, the second sub-theme entails one code, which is *the impact of BSC on higher educational institutions*. The outcomes manifested a great awareness of the importance of BSC adoption and implementation in the study universities and their impact on employees' satisfaction and commitment, which affect organizational performance. These results align perfectly with the respondents' recognition that the desired achievements are conditioned with the availability of the necessary human, administrative, and financial resources.

Chapter Five: Discussions of the Findings and Conclusions

Introduction:

The cross-examination and discussion of the research findings lay the groundwork for the theoretical and practical implications of the quantitative sets of empirical evidence throughout this closing chapter. Therefore, the outputs from semi-structured questionnaires are analyzed and synthesized to account for the hypotheses and provide answers to the research questions proposed in the light of extant literature and corresponding research findings. In the meantime, potential limitations, recommended future research, and ultimate conclusions are outlined.

1 Demographic Data : Respondents' Profile

The respondents' categories, frequencies, and percentages are analyzed in this section

1.1 Universities Senior Managers Profile, Frequency, and perctanges Information

Table 29: Universities' Senior Managers Profile, Frequency, and perctanges Information (n= 194)

Category	Age			SEX		Education Level			Seniority in the position		
Senior Managers	36-45	46-55	56-60	Female	Male	Masters	Doctorate	Other degrees	btw2 and 4	btw5 and10	Btw 10 and14
Frequencies	74	86	34	69	125	7	155	32	120	58	16
Overall Percentages	38%	44%	18%	36%	64%	4%	80%	16%	62%	30%	8%
Dean / director	12,16%	5,81%	11,76%	4,35%	12,00%	0,00%	11,61%	0,00%	11,67%	6,90%	0,00%
Vice-Dean in charge of Continuing Education & Projects Office	24,32%	16,28%	23,53%	23,19%	19,20%	0,00%	23,87%	9,38%	27,50%	6,90%	18,75%
Vice-Dean in charge of Scientific Research and Cooperation	25,68%	19,77%	32,35%	31,88%	20,00%	0,00%	17,42%	62,50%	15,83%	39,66%	31,25%
Vice-Dean in charge of Academic Affairs and Student Life	18,92%	12,79%	17,65%	17,39%	15,20%	0,00%	14,19%	28,13%	19,17%	13,79%	0,00%
Director of Center for Doctoral Studies	5,41%	16,28%	8,82%	10,14%	11,20%	0,00%	13,55%	0,00%	5,83%	10,34%	50,00%
Head of Department	5,41%	18,60%	5,88%	11,59%	11,20%	0,00%	14,19%	0,00%	12,50%	12,07%	0,00%
Secretary General	8,11%	10,47%	0,00%	1,45%	11,20%	100%	5,16%	0,00%	7,50%	10,34%	0,00%

Table 30: Synopsis of Senior Mangers statistics

Senior Managers	Categories	Frequencies	%
Gender	female	69	36%
	Male	125	64%
Age	36-45	74	38%
	46-55	86	44%
	56-60	34	18%
Education Level	Masters	7	4%
	Doctorate	155	80%
	Other degrees	32	16%
Seniority in the position	btw 2 and 4	120	62%
	btw 5 and 10	58	30%
	btw 10 and 14	16	8%

Table 31 provides detailed information concerning the various senior managers' groups in terms of their age categories, gender, education level, and seniority in their positions.

Gender: with the frequencies of 69 for female (36%) and 125 for male leaders (64%), the gender distribution proves to be mainly in favor of male leadership representativity. Regarding cross-section partition, most deans of faculties and directors of higher institutes are men (12, 00%) in comparison to 4.35% for women. The Director of the Center for Doctoral Studies category displays a relatively slight dominance (11, 20%) on the side of male leaders as female directors achieve 10, 14%. Similar results tend towards the prevalence of male leadership reported in the Secretary General range with 11, 20%, whereas females obtain a low proportion of 1, 45%. Nonetheless, women proved their influence in the remaining four categories (i.e., Vice-Dean in charge of Scientific Research and Cooperation female 31, 88% and male (20, 00%),

Age: with the frequencies of 86 for the 46-55 age segment (44%); 74 for the 36-45 age group (38%); and 34 for the 56-60 age range (18%), the largest category of senior managers fall within the age segment of 46-55. On that account, the sub-categorization proved that three groups, namely, Directors of Center for Doctoral Studies, Heads of Department, and Secretary Generals appertain to this age range with individual percentage rates of 16.28, 18.60, and 10.47 respectively. In the meanwhile, three groups belong to the allotted span between 36-45, namely, deans /directors (12.16%), Vice-Dean in charge of Continuing Education & Projects Office (24.32%), and Vice-Dean in charge of Academic Affairs and Student Life (18.92%). These outcomes exhibit that most top executives are middle-aged (between 36 and 55 years old).

Education Level: with the frequencies of 7 (4%) for Masters, 155 for the doctorate (80%), and 32 for other degrees (16%), most of the respondents have higher education degrees. Concerning

representative cross-section, the group of Vice-Dean in charge of Continuing Education and Projects Office achieves the highest ratio in terms of Ph.D. acquisition with 23, 87% followed by the Vice-Dean in charge of Scientific Research and Cooperation (17,42%), and Vice-Dean in charge of Academic Affairs and Student Life as well as Head of Department with 14,19%.

Seniority in the Position: with the frequencies of 120 for the career duration between 2 and 4 (62%); 58 for the course of 5 and 10 (30%); and 16 for the stretch between 10 and 14 (8%), the largest category of senior managers falls within the seniority in the position between 2 and 4. On that account, four groups, namely, dean/director (11,67%), Vice-Dean in charge of Continuing Education & Projects Office (27,50%), Vice-Dean in charge of Academic Affairs and Student Life (19,17%), and Head of Department (12,50%). The seniority distribution bears considerably upon the development, implementation, and continuity of the various internal performance assessment schemes.

1.2 Universities' Subordinates Profile, Frequency, and Percentage Information

Table 31: Synopsis of Subordinates statistics

Subordinates	Categories	Frequencies	%
Gender	Male	273	45%
	Female	340	55%
Age	26-35	155	25%
	36-45	182	30%
	46-55	149	24%
	56-60	127	21%
Education Level	Bachelor	245	40%
	Masters	201	33%
	Doctorate	77	13%
	Other degrees	90	15%
Seniority in the position	btw 2 and 4	244	40%
	btw 5 and 10	213	35%
	btw 10 and 14	103	17%
	14 and over	53	9%

Table 33 provides detailed information concerning the various groups of the subordinates in terms of their age categories, gender, education level, and seniority in their positions.

Gender: with the frequencies of 340 for females (55%) and 273 for male leaders (45%), the gender distribution among subordinates proves to be slightly in favor of female representativity with a 10% difference.

Concerning cross-section partition, Services attached to the Dean received the highest percentage in favor of females with 10% compared to 7% for males. They were followed by Services connected to the Vice Dean in charge of Scientific Research and Cooperation with 9% for females and 6% for men and Services attached to the Director of Center for Doctoral Studies with 7% and 6% for males. The residual groups achieve proportions lower than 7%. The gender partition in the subordinate sample revealed that only ten percent of women outnumber men discarded any threat of gender bias in the quantitative survey outcomes.

Age: with the frequencies of 155 for the 26-35 age segment (25%); 182 for the 36-45 age group (30%); 149 for the 46-55 age range (24%), and 127 for the 56-60 age stretch (21%), the largest category of employees falls within the age segment 36-45. The second age classification is 26-35, followed by the age category 46-56, and lastly, 56-60. Regarding the sub-categorization, results showed minimal differences between most groups (e.g., for the age range 26-35, Services attached to the Dean 5%, Services connected to the Secretary-General 2%, Services attached to the Vice Dean in charge of Scientific Research and Cooperation 3%, etc.). These results reveal that the subordinates' population is much younger than leaders (between 26 and 55 years old).

Education Level: with the frequencies of 245 (40%) for Bachelor, 201 for Masters (33%), 77 for the doctorate (13%), and 90 for other degrees (15%), most of the respondents have higher bachelor degrees. Concerning the sub-groups, the proportions are extremely close across all the categories. For instance, Services attached to the Dean the sub-sample achieves 4%; School Service 3%; Information System Service 5%; and Department of Financial Management and Patrimony 5%.

Seniority in the Position: with the frequencies of 244 for the career duration between 2 and 4 (40%); 213 for the duration of 5 and 10 (35%); 103 for the stretch between 10 and 14 (17%), and 53 14 and over (9%), the largest category of subordinates falls within the seniority in the position between 2 and 4. On that account, Services attached to the Vice Dean in charge of Scientific Research and Cooperation, Department of Financial Management and Patrimony 2%, Services attached to the Vice Dean in charge of Continuing Education & Projects Office 3%, etc. The seniority in the position has a sizeable effect on the university performance assessment, programs, commitment, and sustainability. (For an extensive account of the Universities' Subordinates Profile, Frequency, and Percentage Information, see appendix Q on page 465).

2 Discussion and Conclusions of Quantitative Findings

2.1 Leadership Style:

In this section, thorough inferential analyses, a revisit of the research hypotheses' statistical accounts, and answers of the research questions related to leadership style construct are detailed as follows:

The empirical evidence from MLQ 5X reveals that five out of six hypotheses (from hypothesis 5 to 10) underlying leadership style were validated. The hypothesized paths underlying three dimensions of leadership style proved to be highly significant. Therefore, the positive/negative correlations between transformational, transactional, and effective practices and leadership styles were corroborated, thus providing substantiation to their effects on employees' performance. However, the laissez-faire dimension, which entails a negative perception of leadership style, was not validated since its two indicators failed to explain the postulated correlation. On that account, the unfavorable impact of such type of non-transactional (laissez-faire) leaders organizational was refuted. These significant outcomes denote that with the exception of transactional patterns, the integrality of the leadership practices leads to favorable employees' performance with slightly different degrees of influence from one another. Correspondingly, the findings related to idealized influence, individualized consideration, inspirational motivation, and intellectual stimulation manifested positive correlations between these practices and employees' performance. However, this study's findings depict the three subscales of transactional leadership: Contingent Reward, Management-by-Exception (active), and Management-by-Exception (passive), as conducive to the negative perception of the employees to their leaders, which leads to inferior performance on the part of the university administrators, middle managers, and subordinates. Furthermore, part of the discussion of the empirical results and related exerted an effect on organizational performance entails the analysis of the BSC four items: Learning and Growth perspective (human/information), financial perspective (sufficient financial funds), and internal Process Perspective (Bottom-line operations). Noteworthy, in the context of this study, the BSC perspectives were operationalized to form organizational performance indicators (20 items) in the research path model. Regarding the ninth and tenth assumptions, they could vindicate the substantial influence of adequate leadership practices on generating higher job satisfaction and higher organizational commitment among employees.

- **Hypothesis 5:** The **transformational** practice will lead to a **positive** perception of **leadership style**, which affects employees' performance favorably.

The coefficients reveal that the hypothesized path underlying the relationship between transformational and leadership style proved highly significant with $\beta = 0.561$ and P value = 0.000. What is more, the T-statistics (T-value) substantially exceeds the cut-off 1.96 (Wong, 2013) and reaches 54.780, which provides a strong substantiation and support for the fifth hypothesis. Accordingly, favorable universities' performance was vindicated to be affected considerably by the executives' diverse practices that fall within the range of transformational leaders. These results are in line with Bass's (1985) findings that advocate the role that transformational leaders play as they focus on individualized consideration, intellectual stimulation, idealized influence, and inspirational motivation to trigger the subordinates' admiration and trust. In the same vein, Fu-Jin et al., (2010) conclude that transformational practices such as showing concern, interest, and appreciation vis-a-vis employees fuel their curiosity and arouse their desire to get to work and achieve high performance. Howell & Avolio (1993), who associate transformational managers with the positive prediction of performance, and Bass et al., (2003), who confirm the direct liaison between the prediction of performance and transformational leadership, have reported similar outputs. More results obtained in favor of the great impact that transformational practices can have on leadership style perception and performance have been revealed by Morrow (1983), who considers that this category of leaders boosts the abilities of their subordinates, enhance their self-sufficiency, and delegate tasks to engage them into the organizational value. These practices prompt them to excel and make every effort to achieve their best performance. The current study brings to light the explicit correlation between transformational leadership and satisfactory employees' perception and accomplishment. It deems that the whole package of leadership behavior (idealized influence, individualized consideration, inspirational motivation, intellectual stimulation) is a captivating and alluring practice that contributes to the organizational setting and staff perception of their leaders. This leads to superior performance on the part of the university administrators, middle managers, and subordinates.

- **Hypothesis 6:** The **transactional** practice will lead to a **negative** perception of **leadership style**, which affects employees' performance unfavorably.

The descriptive statistics related to the relationship between transactional practices and leadership style were found to be very substantial as the aggregate of the T-statistics received a sizeable value of 63.220, and the P-value displayed a high significance with 0.000 ($p < .05$). Therefore, as reported by these outcomes, the sixth hypothesis is vindicated in this research.

The results exhibited that employees at the Moroccan universities manifested their reluctance, if not categorical rejection, to work with transactional leaders (deans) as they perceived these executives as task-oriented and careless about their needs. Therefore, this study revealed that transformational management is more associated with positive organizational performance than its transactional counterpart is.

In keeping with these results, information received from various studies has shown contrasting outputs regarding this relationship. On that account, similar conclusions to this study have been advanced by Antonakis et al., (2003), who find out that the most obvious negative side of the transactional leadership is embodied in the management-by-exception (passive and active) practice. They reveal that this management type adopts an expectant behavior of the task accomplishment and takes measures against employees for their inability to meet their high-performance expectations. This triggers a negative perception of the role and practice of the leader. Similarly, Bass (1985) highlights other critical practices of the transactional manager (from the subordinates' perspective) and elaborates that management-by-exception and reward are transactional leadership drivers. These consolidate the corrective actions against subordinates in the case of the non-achievement of the goals and generate a notorious reputation of this type of leader. In the meanwhile, other scholars have drawn opposite conclusions; they have underscored the favorable effect of transactional leaders on performance. In this respect, Timothy et al., (2011) examine attentively the exchange process that enables transactional leadership to exert a positive influence on performance. Similarly, Bass & Avolio (1990) reveal that transactional leaders support their subordinates and entice them to perform highly through a reward system that leads to achieving the planned performance. Timothy et al., (2011) ratify the positive association between the transactional type of leaders and organizational performance. This study's findings depict the three subscales of transactional leadership: Contingent Reward, Management-by-Exception (active), and Management-by-Exception (passive), as conducive to the negative perception of the employees to their leaders, which leads to inferior performance on the part of the university administrators, middle managers, and subordinates.

- **Hypothesis 7: non-transactional leadership (laissez-faire)** practice will lead to a negative perception of **leadership style**, which affects employees' performance unfavorably.

The statistical evidence from PLS coefficients clearly indicates that this hypothesis is refuted with a T-statistics average of 1.858, which is under the required threshold of 1.96

(Wong, 2013) and a P value of 0.064, which deviates from the acceptable ratio of 0.005 to corroborate the hypothesis. Therefore, the non-significance of this hypothesis is confirmed.

What explains such a result is that laissez-faire leaders tend to establish good relationships with everyone. They strive to consolidate these bonds by avoiding any control mechanisms and giving employees the total freedom to make decisions and handle their daily routines the way they want. However, different conclusions have been formed by Deluga (1992), confirming the subordinates' lack of satisfaction with their non-transactional leadership and inferior productivity due to the underperformance of the organization. Moreover, Dubinsky et al., (1995) maintain that with such type of leaders, employees are left on their own, especially in the time of crisis. Bass & Avolio (1997) label this sort of behavior on the part of leaders "avoidance of leadership" thus, referring to the leader's unwillingness to make decisions and the inability to provide incentives to engage and motivate subordinates or meet their individual needs. Meanwhile, despite the invalidation of the assumption, perplexing effects (positive and/or negative) were displayed in relation to the employees' desire to work under this kind of manager. Therefore, employees at the Moroccan universities showed two variant predilections: those in favor of working with a non-transactional leader constitute the highest proportion (65 %) and those against working with this type of leader (35 %). Therefore, this paper showed that the employees' ratio with unfavorable stances towards laissez-faire management exceeds that of the employees with favorable standpoints towards it.

- **Hypothesis 8: Effectiveness** will lead to a positive **perception of leadership style**, which affects **employees' performance** favorably.

The research outputs confirm the statistics' compliance with the requisites to support the assumption. Therefore, with Standard β = 0.159, T value = 32.804, and P value = 0.000, the strong significance of this hypothesis is attested.

This study underscored the crucial role of effective managers and executives in upgrading organizational outcomes for measuring the correlation between leadership effectiveness, leadership perception, and its influence on performance. The effectiveness dimension indicators could explain this correlation and bring to focus the considerable impact that effective managerial practices exert on group efficiency and meeting the job needs. On that account, it was found that through effective planning, execution, and assessment that teams seek excellence in their performance.

Relevant findings were revealed throughout the extensive empirical research. In this respect, Strang (2005) accentuates the tight linkage between satisfied employees, leadership effectiveness, and organizational productiveness. Northouse (2013) concludes that contextual

situations are the determinants of how leadership effectiveness affects subordinates' performance. Leaders who are qualified as highly effective are not those with past performance records, rather these are the ones who have efficient schemes of performance enhancement. They do that by constructive influence and dynamic leadership towards their subordinates (Barchiesi et al., 2007). This dynamism could be synthesized in the various managerial practices that foster effectiveness in this study. These involve forming and training teams, planning actions and schemes with ongoing review of the goals achievements, and standardizing group assessment. Wang & Rode (2010) disclose that an effective leader manifests a proactive approach in dealing with employees as a fundamental constituent in the organization by integrating them in the decision-making process to build strong bonds between the senior management and the followers.

- **Hypothesis 9:** The adoption of an adequate **leadership style** will lead to higher **job satisfaction** among employees.

Based on the descriptive indicators, the ninth hypothesis has been ratified with the coefficient value of 2.848 for the T-statistics (>1.96 , Wong, 2013), and a significant P-value of 0.005.

Data from respondents draw attention to the fact that the nature of the relationship between leaders and subordinates reflects the employee and the organization's productivity. They confirm that leaders who are supportive and considerate towards the personnel can boost performance and reduce work stress. Therefore, most respondents tend to identify themselves with transformational leaders' mission and values (74 %). In the meantime, the transactional pattern received little support as being conducive to higher employees' satisfaction with their jobs (17 %). Laissez-faire type (9 %) generates perplexing results regarding the degree of contentment depending on employees' perception of the role of these leaders. Yet, a large proportion of feedback manifested discomfort while dealing with non- transactional executives.

These results find further justification in the abundant research that confirms that leadership styles directly affect employees' job satisfaction, influencing straight organizational performance. In this regard, Kelloway et al., (2012) findings establish a close relation between transformational leadership and employee satisfaction. Furthermore, Wilson (1995) reveals that leadership style upgrades employees' achievement by intensifying their satisfaction. Brockner (1988) perceive managers as boosters of subordinates' self-confidence and satisfaction. Concerning tertiary education, both intrinsic and extrinsic incentives and incitement are highly supported as boosters of job satisfaction (Pauline, 2013). This study dag

into the Moroccan university management and determine the causes of satisfaction and dissatisfaction among employees. On that account, while some of the findings pinpoint satisfaction as a concept, which is directly related to the job itself, the rest of the descriptions incorporate factors that contribute to the shaping of the employees' employees' thought and stance regarding their organization. Thus, the major factors affecting employees' employees' contentment and comfort in their jobs are linked to their leaders' leaders' practices, the environment in which they operate, and the employee's self-recognition within the organization. The findings prove that males (60 %) are more content and comfortable in their jobs than females (40 %). This may find justification in the fact that they hold executive positions, the high pace of promotion in their posts, and gender discrepancy. The data also showed that High job satisfaction was identified with employees' affective or emotional state towards their leaders, reflecting in their attitude and overall performance. In this regard, employees who felt "happy" in their positions manifested a positive and proactive attitude towards their managers. In contrast, those who expressed their explicit "dislike" of the work conditions disclosed a negative stance and careless regard to their leaders' relationships. It was also substantiated that satisfied employees yield higher productivity and disclose more engagement than dissatisfied members do. The integrality of these outputs is perfectly in line with Worrell's (2004) provision of three determinants of job satisfaction: demographic indicators (gender, age, and race); intrinsic indicators (accomplishments, progress, recognition, etc.); extrinsic indicators (management policy, connection with leadership, income, and relationship with colleagues, etc.).

- **Hypothesis 10:** The adoption of an adequate **leadership style** will lead to a higher **commitment** of the employees to their organization.

It posits a positive relationship between the adoption of proper leadership style and the achievement of a higher commitment of the employees to their organization. With the conform averages of $\beta = 0.753$, T value (T-statistics) of 28.999, and P value= 0.000, this hypothesis has been amply authenticated and supported.

Broadly, the results disclose that committed members contribute to accomplishing the company's goals and mission. Thus, commitment is reflected in how zealous and enthusiastic one can be while achieving organizational goals and accomplishing the best possible performance.

Therefore, most respondents tend to identify themselves with both transformational and transactional leaders' (44 % 40 %, respectively). In the meanwhile, the laissez-faire pattern received a little advocacy of being conducive to higher employees' commitment to the leaders'

mission and values. Accordingly, this study draws inferences that various leadership styles possess favorable connections with subordinates' attitude, motivation, and management, which reflect on the overall organizational commitment. Employees who demonstrate high commitment tend to identify themselves with their leadership values and mission. They make personal compromises for the sake of the company's success. They display a much higher performance than expected. They also contribute to the general development and effectiveness of their firm. In fact, committed employees are loyal to their leaders and organization despite the potential challenges they may encounter. Results from PLS tests lay out analogous evidence from the predominant research in this area. In this respect, Savery & Luks (2001) establish an immediate link between the extent to which employees take part in the organization and their satisfaction with their leadership in the workplace. Simply put, the employees who are involved in the decision-making process display intense commitment to the organization. While most of the studies rate the significance and influence of transformational leadership on the level of job satisfaction and organizational commitment highly, other scholars such as Mester et al. (2003) add the favorable effect of transactional leadership on the emotional commitment to transformational leadership. This research attributes the employees' noticeable performance to the strong affective commitment that helps to establish a strong affiliation of the employees with their workplace. It entails the members' feelings towards their institutions. Besides, it ratifies the role of commitment in consolidating the emotional attachment between the objectives and values of the organization and the individual's role to achieve these goals and values, and the affective connection with the organization as a whole. This is in line with Mcshane & Glinow's (2010) findings that highlight employees' emotional attachment to the organization as the primary affective factor that helps them form their perceptions, identify with their leaders, and engage in their workplace.

Analyses and conclusions of Leadership Style Research Questions:

- The first research question proposed was, what are the **dominant leadership styles** in Moroccan universities?

Three leadership patterns were examined throughout this research paper to figure out the predominant one (s) in higher education. Therefore, 55% of the respondents state that they work with transactional leaders. 35 % refer to their top executives as having transformational qualities, and 10 % characterize their superiors as non-transactional or laissez-faire leaders. The answer to this research question can be elucidated from Burns' (1978) perception of transactional leadership as traditional managerial practices perspective, which gives priority to administering operations and transactions occurring daily. Thus, this denotes that Moroccan

higher education administration is based on the traditional philosophy of management that emphasizes managerial and supervisory responsibilities. On that account, these university executives adopt sets of interactive behaviors and practices that enable them to realize their goals, emphasize assigned tasks, boost subordinates' motivation, establish a reward system, and enhance organizational effectiveness. Meanwhile, transactional leaders assist their subordinates in actualizing their self-regard, reducing the tension resulting from labour, and stressing on the quality of the product.

The outcomes prove that transactional leadership generates more consent and approval on the part of the employees who seek leadership effectiveness. It is seen as a booster of innovation, creativity, and innovation. Meanwhile, when considering the subordinates' satisfaction, studies reveal that employees favour being managed by a transformational leader rather than a transactional one. For this reason, Bass (1990) concludes that the transformational model is more effective than the transactional model. However, Bass (1985) points out that the transformational and transactional patterns should not be conceived as self-contained or opposites. He further argues that the transformational style is founded on the transactional one. He also contends that a leader can resort to any of these behavioural patterns depending on the situation. What is more, he claims that transformational leadership would rather be inadequate and useless in default of a transactional basis. Thus, contemporary management theories posit the necessity of incorporating both types of leadership to establish an effective model of leadership. Nonetheless, criticism regarding any perceived shortcomings related to this model is disclosed. Firstly, there is a striking scarcity of empirical findings depicting the effect of this model of leadership on teams, groups, and organizations (Yukl, 1999). Yukl further criticizes the shortage of adequate accounts of situational and contextual factors and their impact on leadership performance. A hybrid pattern gathering transactional and transformational practices dominate the higher educational system in Morocco. The emphasis on the first management type (transactional) entails a heavy focus on organizational structure, bureaucracy, and chain of command within Moroccan higher institutions. It was also found that only a few of the surveyed higher educational institutions (15 %) adopt and implement systematic models of leadership measurement. Even with the existence of some samples of internal assessment, their implementation remains very limited, irregular, and restricted to occasional attempts and narrow spheres of trial.

- The second research question proposed was, how does **leadership style** affect **organizational performance** in Moroccan tertiary education?

The interrelationship between leadership style and organizational performance was scrutinized in pursuit of the positive-negative effects that the former has on the latter. In this respect, Fu-Jin et al., (2010) pinpoint that the various styles that leaders adopt can lead to a positive or negative influence on organizational performance according to the determinant factors that researchers utilize in their investigations of the nature of this correlation. Therefore, regardless of which leadership style is predominant in Moroccan universities, the most considerable empirical evidence in this study is in favour of the positive impact of the transformational leadership on organizational performance in comparison with the transactional style. Having inferred that, the effect of the transformational pattern of management on organizational performance indicators: Learning and Growth perspective (human/information), customers'/stakeholders' satisfaction (customer knowledge), financial perspective (sufficient financial funds), and internal Process Perspective (Bottom-line operations) was very significant. This brings to light the role that this type of managers can play in embracing and implementing BSC schemes within their HEIs. Thus, findings reveal that the senior managers (deans/directors, vice-deans, directors of centres for doctoral studies, heads of Department etc.) that are characterized by transformational features have inspiring visions that the administrative and educational staff embrace and work towards implementing them. This assumption fosters their sense of belonging and create a general desire to work with this type of university managers. The strength of these university executives is embodied in their ability to trigger maximum excitement and energy from the subordinates and induce them to embrace its vision and goals for the ultimate objective of achieving high performance. On that account, they play a critical role in motivating and prompting their subordinates to realize the organizational goals. An effective dean, for instance, aims at altering the status quo (particularly for newly appointed deans who strive to change the prevailing situation into a motivating work environment) and directing the personnel and the environment into the path of excellence and success. Universities' top executives who were qualified to be efficient by their subordinates, were perceived to lead through a change process in which they become more motivated and more willing to perform according to high standards and high quality. These transformational practices along with enticing followers to adopt their vision without any coercive strategies or abuse of power were proved to leverage performance. The data have shown that employees' perception towards their leader is crucial in establishing bridges of communication and interaction at different departments and offices. The flow of information was substantiated to

be very smooth as it trespasses in many cases, the complex bureaucracies governing university superiors and subordinates.

Correspondingly, the findings related to idealized influence, individualized consideration, inspirational motivation, intellectual stimulation manifest positive correlations between these Practices and employees' performance. This corroborates the substantial and favourable impact that these practices have on the quality of work and performance in these higher educational institutions. In this line, Howell & Avolio (1993) associates transformational managers with the positive prediction of performance, and Bass et al., (2003) confirm the direct liaison between the prediction of performance and transformational leadership. The style adopted by supervisors in administrations do have a considerable impact on the performance of the universities. One more testimony in favour of the great impact that transformational leadership can have on performance is the one that Morrow (1983) advances. He considers that this category of leaders boosts the abilities of their subordinates, enhance their self-sufficiency, and delegate tasks to engage them into the organizational value. This shall prompt them to excel and make every effort to achieve their best performance.

On the other hand, the findings reported that the prevalence of the transactional type insinuates that Moroccan university management is characterized by controversial practices such as Contingent Reward, Management-by-Exception (active), and Management-by-Exception (passive). These were found to be conducive to the negative perception of the employees to their leaders, which leads to inferior performance on the part of the university administrators, middle managers, and subordinates. Regarding laissez-faire, this management style does have good relationships with everyone in the organization as it strives to consolidate these bonds by avoiding any control mechanisms and by giving employees the total freedom to make decisions. From these revelations, this paper deduces that the organizations managed by non-transactional leaders underperform. Yet, despite the previously listed negatives, it also posits that a large proportion of employees prefer working with this type of leadership since they enjoy the lack of control and supervision and complete freedom to take initiatives and decisions. This paper deduces that this style does have negative repercussions on both the mid-term and long-term achievement of the universities. It can be inferred that a leader's skills of managing everyday activities and operations, and boosting creativity and innovation among employees (transactional) are deemed inadequate in default of explicit concern, interest, and appreciation vis-a-vis employees. The aim is to fuel their curiosity and arouse their desire to get to work and achieve high performance (transformational).

Total Quality Management:

The empirical evidence from TQM reveals that the five proposed hypotheses (from hypothesis 11 to 15) underlying Total Quality Management were validated. The hypothesized paths underlying the three dimensions of TQM proved to be highly significant. Therefore, the positive/negative correlations between financial autonomy, academic autonomy, and administrative autonomy and total quality management were established, thus providing substantiation to their effects on employees' performance.

These significant outcomes denote that in case that the integrality of the TQM applications requirements is made available, they would contribute to favourable employees' performance with slightly different degrees of influence from one aspect of autonomy to another. Correspondingly, the findings associated negative impact to the correlation between the indicators of financial autonomy: state funding dependency and accounting inefficiency, TQM, and employees' performance. This negative result is mainly due to the lack of independence in managing funds as well as the absence of professional accounting entities within most HEIs. Meanwhile, this study's findings depict the two subscales of academic autonomy, curricula design and adoption, and modularized system, semesters, and cycles, as conducive to the superior performance on the part of the university administrators, middle managers, and subordinates. Another significant output was observed in regard to the administrative autonomy's indicators (decentralization, deconcentration, and self-governance), which were proven to explain the correlation positively with organizational performance. Concerning the fourteenth and fifteenth assumptions, they were able to vindicate the substantial influence of total quality management on generating both higher job satisfaction and higher organizational commitment among employees.

- **Hypothesis 11: Financial applications** will have a **negative** effect on **Total quality management** implementation in Moroccan higher education, which affects employees' performance unfavourably.

The PLS coefficient outputs establish the validity of the unfavourable impact that the inadequate application of financial autonomy bears upon the execution of total quality management strategies in the studied universities. Thus, with a Beta value of $\beta=0.650$, T value= 97.077, and P value= 0.000, the eleventh hypothesis has been corroborated and supported.

This study drew a significant inference regarding the correlation between financial autonomy and TQM. Therefore, it authenticated the two indicators of financial autonomy: state funding dependency and accounting inefficiency. It was found that both items translate this correlation. On that account, findings associated the negative effect of the financial applications

to the lack of independence in managing the resources provided either by the state or other external funding entities. Thus, the respondents rated the universities' financial autonomy in terms of the extent of their reliance on state funding and their capacity to raise extra resources and revenues. They argue that educational institutions do not handle the corporate model of financial management (setting tuition fees, taking on loans, investing, etc.) adequately. The reason for this lies in the inability to raise public funds and the incapacity to allocate them according to these institutions' needs and priorities.

In the meanwhile, In terms of accounting, it accounts for the absence of an independent system within universities, which still count on dashboards to provide general and analytical accounting (Bencheikh & Ellabbadi, 2013). In this sense, the results showcase that most HEIs do not have accounting entities that enable them to order or oversee their income or expenditure. This entails a complete absence of independent and well-defined internal accounting bodies within Moroccan universities. This fact fosters state control over tertiary education in the kingdom. The malfunctioning or lack of accounting bodies in Moroccan universities hinders self-governance and, therefore, affects the financial autonomy of universities negatively. It is self-evident from the above revelations that a better higher education performance in Morocco is contingent upon more financial independence and reliable internal accounting systems. The financial inadequacy also embodies the restrictions imposed on universities to run budgets. In this regard, Olsen (2007) rejects the notion, which advocates that universities should serve the external agenda of the state, and he argues that universities should possess their objectives. Part of these schemes, there should be a total quality management program with a specific budget and plan of execution. McDaniel (1996) examines the levels of autonomy from financial, managerial, educational, and human resources perspectives. He concludes that the wise application of financial independence lies in the universities' ability to separate investment budgets and operational budgets. This denotes that any failure to handle financial decisions at the internal level of the university will affect any plan for the carrying out of a TQM approach. Direct financial control should not be exercised over universities through regulations. The state should be in charge of setting the general rules for the functioning of the universities (Dobbins & Knill, 2009, p. 408). Meanwhile, self-governance denotes a high financial autonomy and decentralized decision-making process. Total financial autonomy is the hallmark of the success of any quality management model, as the state should not interfere with the university budget. The university executives in charge of governance and managing universities should enjoy extended freedom in taking financial decisions. This study draws the conclusion that self-governance of the financial matters is the most crucial attributes that contribute directly to the

autonomy of an educational institution. Most of the descriptions of university autonomy focus on the extent of independent and self-steer that universities enjoy in terms of running their budgets. Therefore, the inability to manage the existing funds, the absence of accounting bodies, and the scarcity of extra sources were proven to impede any total quality management roadmap in Moroccan HEIs.

- **Hypothesis 12: Academic applications** will have a **positive** effect on **Total quality management** implementation in Moroccan higher education, which affects employees' performance favourably.

Results from the PLS test lay out that the aggregate of T-statistics rates 3.797 (>1.96 , Wong, 2013) and P-value achieves 0.000. Accordingly, with the path coefficients matching largely the required norms, the accuracy of this hypothesis has been validated. Thus, the academic applications that include autonomous decision-making at the level of curricula design and adoption, modularized system, semesters, and cycles are found to have a positive effect on TQM and organizational performance in Moroccan Higher education.

These results confirm the genuine implementation of the reforms related to the academic issues in the Moroccan HEIs and their noticeable impact on the ground. The raters conceive the academic components of university independence as very effective. This is apparent in managing academic issues, ensuring efficient and customized decisions at the level of choosing an appropriate curriculum, organizing the educational year, setting standards for students' enrollment and submission, and optimizing scientific research. A great deal of the corresponding research has affirmed that the execution of an appropriate TQM matrix that involves academic schemes can have a significantly positive influence on performance. On that account, Altbach (2001) underscores the huge influence of academic freedom on upgrading achievements. Academic freedom affects the learning-teaching process directly as it denotes freedom of teaching and doing research for professors, and freedom of acquiring knowledge and learning for students (Altbach, 2001.p, 206). Peak (1995) sheds light on the benefits of TQM implementation in HEIs and lists many advantages such as the upgrade of the learning-teaching processes, the creation of motivating educational settings, curricula enhancement, increasing training services, and controlling costs. Nonetheless, Dooyoung et al., (1998) go against the stream and highlight the prospect of missing the preplanned organizational objectives despite the execution of TQM.

- **Hypothesis 13: Administrative applications** will have a **positive** effect on **Total quality management** implementation in Moroccan higher education, which affects employees' performance favourably.

The P coefficients yield statistical reports that adhere to the PLS directions regarding the validation of the hypothesis. The significance of the key indicators, Standard β = 0.024, T value= 3.797, and P value= 0.000, provide evidence of the thirteenth hypothesis and confirm its authentication. Accordingly, adopting modern methods of governance based on decentralization, deconcentration, and self-governance enhances the administrative services and exerts a positive effect on implementing TQM and performance in Moroccan higher education.

The research findings establish the Moroccan pattern of deconcentration as built upon the delegation of responsibilities and decision-making power to the medium authorities such as provinces and regions, and local levels the universities' boards and general councils. This study reaches a conclusion, which supports the need for strong and independent leadership, that implements adequate and comprehensive management to achieve excellence in higher education. Respondents consider that for the effective carrying out of TQM, it seeks to decentralize decision-making and modify the concept of governance. It also needs to make the administration more resilient and the human resources more competent and committed to the improvement of the service they provide. It was also reported that internal governance entails an effective decentralized government and independent administrative structures within HEIs. Diverse studies in this field have inferred that the implementation of any TQM program requires genuine decentralization and self-governance. In the same vein, Davidovitch (2015) states that governance of higher education is embodied in the ability of the administrative and governance structures to make decisions. Woon (2000) makes clear that the execution of the different aspects of TQM associated with managerial productivity, process management, customer focus, and satisfaction exercise positive effects on performance. Abdullah et al., (2010) examine TQM soft effect on the overall performance of the organization and draw the conclusion that factors such as managerial commitment, customer focus, and connections with subordinates have a positive influence on the ultimate performance.

- **Hypothesis 14:** The implementation of **Total quality management** will lead to **higher job satisfaction** among employees.

The claimed correlation is established with ease since the results obtained from PLS vindicate the conformity of the assumption with

$\beta = 0.656$, T value (T-statistics) of 20.030, and P value = 0.000.

This research on employees' perceptions of the implications of TQM practices on job satisfaction has concluded that many aspects of soft TQM practices, namely customer focus and organizational teamwork, have noticeable impacts on job satisfaction. Indeed, employees confirmed that the main target of implementing TQM strategies is to set up an adequate environment that motivates members to do their utmost to achieve the objectives of the organization. The outcomes assert that this type of work atmosphere guarantees high job satisfaction and triggers employees' creativity and innovation as they strive to solve problems and collaborate with workmates, and it fosters teamwork communication. Korunka et al., (2003) have been especially keen on assessing the outcomes before the alterations brought forth by quality management as well as the outcomes observed at different intervals during the execution of the quality management strategy. The findings categorize employee outcomes according to various circumstances, thus depicting them as contextual outcomes. Schlesinger & Heskett (1991) attributes job satisfaction to subordinates' conceptualization of service quality and their self-perception of service abilities. A well-planned execution of total quality management can bring about considerable changes in organizations. These transformations can bear upon some of the most influential organizational behaviours, such as career satisfaction.

- **Hypothesis 15:** The implementation of **Total quality management** will lead to a **higher commitment** of the employees to their organization.

The statistical data lend support to this relationship as standard beta scores 0.911, T-statistics exceed considerably 1.96 (Wong, 2013), and the defining indicator P-value meets the requirements of $p < 0.05$ with the strong significance of 0.000.

The current study has proven the straightforward correlation between TQM and commitment to organizations. A large proportion of raters asserted that TQM alters the environment of work as well as various aspects of quality management for better engagement and comfort of employees in the workplace. Yet, other respondents warned that TQM could lead to reversed outcomes if it is not well-planned and does not involve all stakeholders, including managers and employees. In this respect, Lawler et al., (1998) find out that engaged personnel in the workplace demonstrate a higher inclination to be satisfied, which intensifies their commitment to the firm. In the meanwhile, the success or failure of any TQM plan relies

in the first place on the commitment of the top management (Sohal & Terzivski, 2000). Brooks & Zeits (1999) have undertaken a comprehensive investigation of the employees' commitment to TQM execution among healthcare personnel and affirmed its close link the obtained achievements. On the whole, this study came up with significant findings that provided substantial evidence of the significant relationship between higher commitment, TQM implementation and organizational outcomes. Nevertheless, several researchers have provided many counter-arguments regarding the so-called positive impact/link between quality management practices and employees' satisfaction and commitment. Wood (1999), for instance, contends that many repercussions such as high pressure and heavy supervision may result from teamwork underlying the execution of TQM schemes.

Analyses and Conclusions of Leadership Style Research Questions:

- The first research question proposed was, to what extent are Moroccan universities able to implement the three major applications of **TQM** *financial, academic, and administrative* reforms?

To answer this question, TQM application in HE was perceived as a strategic management system which integrates the financial, administrative (governance), and academic aspects to upgrade education and related services in higher education. Therefore, the combination of these components together with appropriate training and commitment to executing the quality vision was deemed indispensable to implement TQM and achieve high-performance and excellence. Meanwhile, there is evidence from the above findings, which supports the argument that higher education in Morocco falls short of some of these requisites. In this respect, in light of the economic constraints, the financial factor demonstrated the difficulties that most of the higher educational institutions suffer from namely, finding resources, reducing expenditures, resource allocation, and budgetary management. Additional revelation concerns the universities' partial independence to decide on financial matters without interference from the government or other funding entities, which hinders their ability to raise public funds and the capacity to allocate them according to their needs and priorities. Another significant impediment to the sound execution of TQM was the non-existence of well-defined accounting bodies within universities. What is more, most TQM programs require special budgets. These funds can be provided by the state or other external funding entities with all the bureaucracies and complexities that this process entails. Professional training regarding TQM expertise and skills is another obstacle revealed in the outcomes. In default of regular professional training, workshops, and seminars, the notion of quality management remains an occasionally discussed concept in many institutions. The institutionalization of TQM requires

that everyone in the university believes in the concept of quality and works towards its systematic implementation within a standardized framework. In all, despite the few attempts to keep track of internal performance and due to the aforementioned reasons, Moroccan universities are still reluctant to develop the practices of quality assurance through the execution of TQM as an integrated measurement model of internal assessment. In the meanwhile, this finding does not deny the noticeable progress that universities achieved in terms of establishing academic and administrative autonomies. Yet, they still assume the responsibility of allocating and managing budgets as well as organizing and developing different mechanisms to undertake quality check at HEIs. Thus, creating permanent units and committees of quality examination is an important instrumentality to put into effect and overcome any financial or training obstacles.

- The second research question proposed was, how does **Total Quality Management** affect **organizational performance** in Moroccan tertiary education?

The effect of the Total Quality Management system on Moroccan tertiary education was approached from the three aspects financial, academic, and administrative impacts. These correlations were scrutinized following the positive-negative effects that the former has on the latter and the benefits of TQM in the Moroccan context. The findings revealed very significant and positive correlations between academic and administrative aspects of autonomy and organizational performance. Whereas, an insignificant relationship was revealed between financial autonomy and university performance. These outcomes entail rich inferences in terms of the effect exerted by each of these items on HEIs. For instance, most financial items outcomes indicate the slow pace in the university shift from the state oversight to self-governance. By way of illustration, external auditing and staff recruitment were found to be still monitored by the state. In regards to TQM implementation, it was found that the financial perspective lies behind the inefficiency or absence of quality management programs, which bear upon the negative performance of organizations. The academic and governance positive effects on organizational performance provide aspiration of progress and effectiveness in terms of TQM package execution once the monetary issues are resolved. This also suggests that an ongoing restructuring of the administration at the level of these three major applications is currently taking place in public universities. Peak (1995) sheds light on the benefits of TQM implementation in HEIs and lists many advantages such as the upgrade of the learning-teaching processes, the creation of motivating educational settings, curricula enhancement, increasing training services, and controlling costs. These factors helped to provide predictions regarding university performance based on their ability to embrace and carry out well-defined TQM

schemes. Therefore, 35 % of HEIs were deemed to acquire the minimum requisites to apply TQM on a regular basis. Hence, from the existing literature and the outcomes of this study, it was evoked that TQM can bear positive ramifications on the development of universities performance once the three fundamental requirements are met. Yet, the financial factor still constitutes a hindrance to the adoption of TQM as an integrated assessment model in Moroccan HEIs.

Analysis of organizational culture total findings

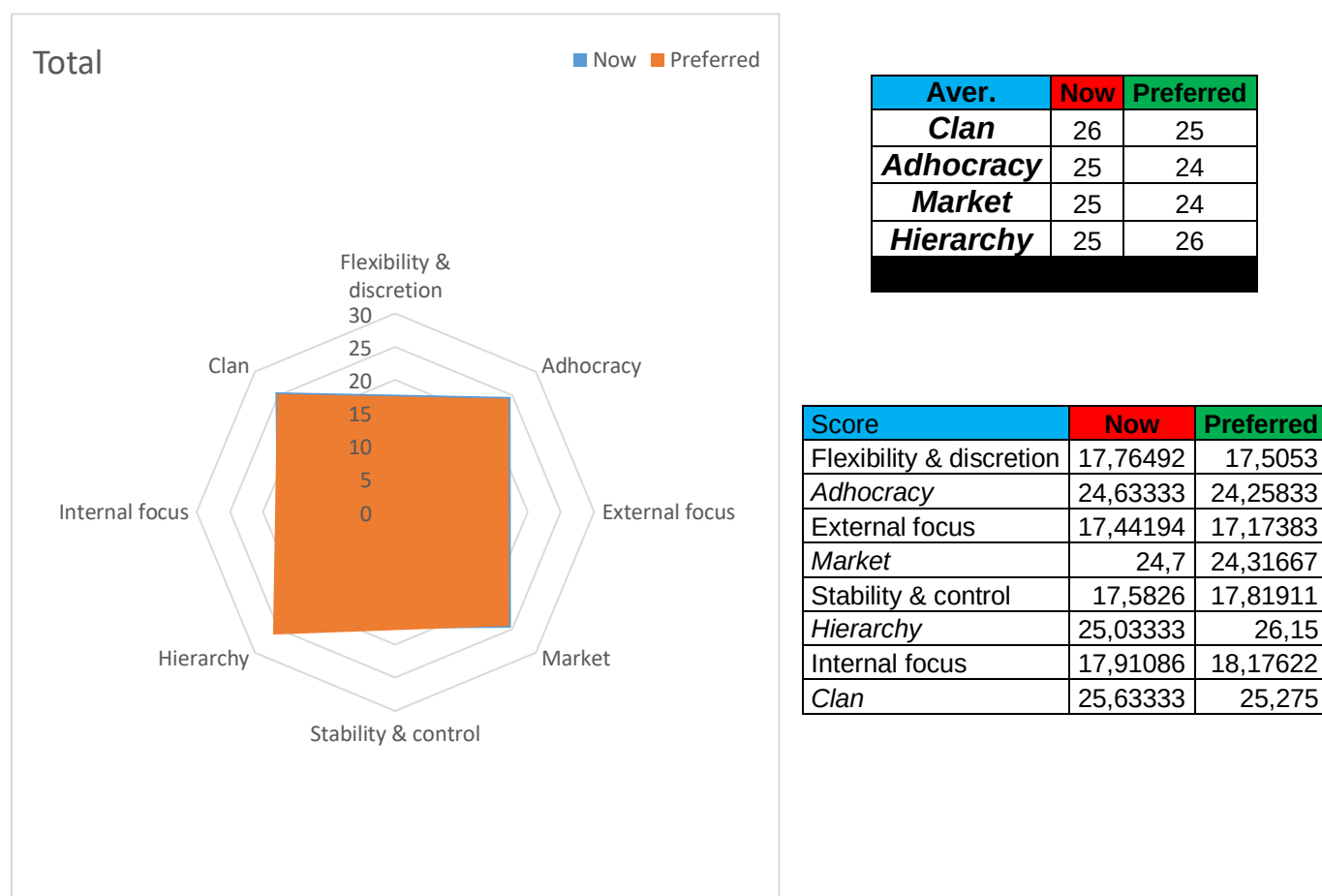


Figure 37: OCAI Total Outcomes

140 participants form the total demographic profile of the OCAI survey. The findings give insights regarding the clan type as the dominant culture with the highest score of 25.63. Subsequently, Hierarchy received 25.03 points. Followed by Adhocracy with 24.63 points. Market culture rated the lowest score with 24.7 points. Consequently, these descriptions assortment is placed within the miscellaneous or mixed category that draws from a variety of features to form a hybrid culture. These cultures are considered as tents rather than places due

to their flexibility and adaptability to different circumstances. In the meanwhile, a noticeable emphasis was placed on the family-like workplace environment.

The examination of the point of difference between the genuine and desired culture, display steady and admissible increases and decreases of all culture types. Therefore, a decrease of 0.38 was observed in Adhocracy; 0.39 in Market; 1.12 in Hierarchy; and 0.36 in Clan pattern. These very indicative points of difference rate under 5, which provide evidence of their strong adequacy. Alternatively, the dominant culture in the preferred situation turns out to be hierarchy culture, followed by clan culture, market, and adhocracy culture. The consistency and congruence of the current working culture have been established with all the 24 differences scoring less than 5 in contrast to the average culture

Analyses and Conclusions of Organizational Culture Research Questions:

- The first research question proposed was, what is the dominant **organizational culture** in Moroccan higher education?

To answer this question, it is noteworthy mentioning that the strength of a given type of culture depends on the aggregate of points it receives in the OCAI measure. Therefore, the mean scores of the indicators were computed following the recommended standard method of scoring. Correspondingly, the culture type currently prevailing in Moroccan universities can comparatively be depicted as clan (25.63) and hierarchy (25.03). Strikingly, the results regarding the dominant cultures are in line with the outcomes of two referential researches to/in this study. On that account, clan prevalence demonstrates consistency with House findings in the Globe study (House et al., 2004) in which Morocco was found to be a collectivistic society where family and In-group (closely-knit teams/clans) are of great value to individual members. What is more, According to Hofstede (2010), Morocco is hierarchical, rule-oriented, collectivist, normative, and restraint culture. He further reports that culture in Morocco gives priority to in-groups (friends and family) where norms of the group regulate the behavior of the individual and paternalistic-considerate leadership manages the team.

With the establishment of the clan and hierarchical patterns as well as adhocracy type with a lower proportion of influence (24.63), the Moroccan higher educational institutions were perceive to operate following a hybrid system of management. This denotes that effectiveness is conceived through a strict sequencing of decision-making and delegation of power as well as evolved soft skills (clan and adhocracy) and typology of management. The findings raise the challenge of incorporating hybrid styles and eclectic methods. This requires a redefining of the hierarchy structure and a reconsideration of the extent and aspects of its implementation. The

purpose is to build a culture that copes with the exigencies of the new model of governance recommended throughout the national reform of higher education. The revelations from respondents confirm the dearth of measurement models for the assessment of the organizational culture (s) prevailing in their universities and their impact on how HEIs achievement in terms of diagnosing, ameliorating, and changing the work atmosphere and conditions.

- How does **organizational culture** affect **organizational performance** in Moroccan tertiary education (direct effect)?

Clan culture was found to exert a positive effect on organizational performance. This bears upon employees' outcomes at Moroccan higher educational institutions. The major embodiments of the positive ramifications in this study are :(1) the subordinates' perception of their organizations as households and their Leadership as supportive. Respondents reveal that their leaders place a premium on loyalty and commitment by facilitating the tasks and empowering individuals via rigorous human development programs to boost performance. Meanwhile, HEIs were qualified as a family where cordiality and friendliness are well-observed everywhere. (2) The prevalent managerial values were evoked to underscore support, collectivism, encouragement, inclusiveness, amicability, friendliness, and informality. From employees' viewpoints, these characteristics contribute to upgrading their performance considerably. (3) The binding factors in universities were perceived to be in line with the amicable atmosphere in the HEIs. The primary instances were having as unified mission and objective to work on as teams. (4) Another aspect that accounts for clan culture favorable impact was (4) strategic emphasis. This component was deemed conducive to higher performance and was associated with numerous embedded descriptions and practices that prevail in organizations, such as, building trust, engaging members, mentoring, cooperating, facilitating, empowering, and team building. In this sense, performance is deemed a group affair that matters to everyone.

This study also confirmed the predominance of hierarchy culture and corroborated its negative effect on organizational performance. The major embodiments of the negative ramifications in this study are (1) the subordinates' perception of their organizations as highly bureaucratic managers who strive to maintain formality within universities (2) The prevalent managerial values highlight the internal orientation of this type of culture as manifested in the extremely formalized and structured bureaucracy that characterizes the workplace. The subsequent aspect considers the establishment of formal rules, external coordination, monitoring, and smooth running of organizations as the predominant components that hold the

organization together (3). The strategic emphasis (4) is mainly on achievement and productivity at the expense of employees' needs and comfort. Thus, giving priority to performance at the cost of employees' comfort hold negative implications on their involvement and achievement. Additional important inferences substantiated the significant and positive bearings of clan and hierarchy patterns on organizational performance indicators: Learning and Growth perspective (human/information), financial perspective (sufficient financial funds), customers'/stakeholders' satisfaction (customer knowledge), and internal process perspective (Bottom-line operations). This brings to light the adequate conditions and environments that the combination of both types can warrant to help universities embrace and implement BSC. Therefore, clan culture was perceived to be conducive to higher stakeholders' satisfaction as well as a better learning and growth development. In the meantime, hierarchy culture was found to ensure efficient financial and internal process management.

2.2 Mediation Analysis:

- **Hypothesis 16: Job satisfaction mediates the relation between leadership style and organizational performance**

The effect of the Job Satisfaction. The indirect effect is positive and significant between leadership style and organizational performance H19: T-value 2,685, which is a very strong value that meets largely the requirement >1.96 (Wong, 2013), the indirect effects 95% Boot CI Bias Corrected: [LL = 0,020 UL = 0,130] indicates that confidence intervals does not entail zero demonstrating there is a mediation (Preacher and Hayes, 2008).

This research on job satisfaction established this factor as a fundamental determinant of organizational performance. In this respect, the results revealed the strong mediating effect of job satisfaction in the relationship between leadership style and organizational performance. This rapport entails that university managers strive to establish satisfactory environments and provide motivating incentives to trigger positive feelings and attitudes on the part of the personnel towards their organizations. Indeed, higher educational institutions showed a general tendency to give priority to their human resources and consider them as strategic factors conducive to competitive performance. Therefore, the link between job satisfaction, leadership style and performance was ratified. The focus on the major antecedents that upgrade employees' performance has been gaining more prominence in management theory and practice owing to the growing interest in human resources, and the important association between the work atmosphere and the contentment of the personnel with the work conditions and their

achievements. Correspondingly, Dugguh & Dennis (2014) hold in high regard the influence of job satisfaction on the performance of employees, and their welfare and productivity of the firms, efficiency, subordinate relationships, and turnover and absenteeism. Similarly, Wright & Wefald (2009) study the indicator of happiness in one's job and its influence on outcomes and conclude that happy employees come up with high outcomes and tend to stick to their jobs. In the same context, Robbins (2001) arrives at the conclusion that employees' happiness and feelings towards their work helps in boosting their performance of tasks in a remarkable fashion.

- **Hypothesis 17: Organizational commitment mediates the relation between leadership style and organizational performance.**

The effect of the Organizational Commitment. The indirect effect is negative and insignificant between leadership style and organizational performance H18: T-value 0,366, which is not in conformity with >1.96 (Wong, 2013), the indirect effects 95% Boot CI Bias Corrected: [LL = -0,044 UL = 0,065] indicates that confidence intervals includes zero demonstrating there is no mediation (Preacher and Hayes, 2008).

Concerning the impact of commitment on performance, the findings acknowledged that employees' commitment constitutes a crucial determinant of their engagement to accomplish organizational goals and optimize productivity and performance. In this regard, results establish commitment as the most integral factor to create competitive performance and a primary indication of subordinates' output and organizational performance. However, the empirical evidence revealed the absence of the mediating effect of organizational commitment in the relationship between leadership style and organizational performance.

Tobing (2006) undertakes a study in which he relates commitment and satisfaction to performance. The results of this research provide evidence of the effects of the multiple dimensions of organizational commitment (continuance, normative, and affective) on the extent of satisfaction among employees. What is more, Riketta's (2002) meta-analysis attempts to uncover the nature of the liaison between organizational commitment and job performance regarding the role of remuneration in boosting satisfaction. The findings confirm the central role of providing suitable recompenses in fostering job satisfaction. Besides, Zia Ud & Khan (2010) put under scrutiny the correlation between organizational commitment and subordinates' job performance and conclude that there is a significantly favorable association between these two variables. Ultimately, Baptiste (2008) comes to the same conclusion that substantiates the favorable correlation between organizational commitment and work

performance. Hence, the current empirical finding deviates from the general outcomes of the international research that generally corroborate the mediating impact of organizational commitment.

- **Hypothesis 20: Job satisfaction mediates the relation between total quality management and organizational performance.**

The effect of the Job Satisfaction. The indirect effect is positive and significant between Total Quality Management and organizational performance H20. T-value 18,973, which is a very strong value that meets largely the requirement >1.96 (Wong, 2013), the indirect effects 95% Boot CI Bias Corrected: [LL = 0,442 UL = 0,544] indicates that confidence intervals does not entail zero demonstrating there is a mediation (Preacher and Hayes, 2008).

The research outputs display that a well-planned execution of total quality management can bring about considerable changes in organizations. These transformations can bear upon some of the most influential organizational behaviors, such as career satisfaction. Respondents report that TQM implementation can alter the environment of work as well as various aspects of quality management for better engagement, comfort, and performance of employees in the workplace. The findings categorize employee outcomes according to various circumstances, thus depicting them as contextual outcomes. Indeed, the main target of implementing TQM strategies is to set up an adequate environment that motivates members to do their utmost to achieve the objectives of the organization. It was revealed that this type of work atmosphere guarantees high job satisfaction and triggers employees' creativity and innovation as they strive to solve problems and collaborate with workmates. In this regard, Korunka et al., (2003) have been especially keen on assessing the outcomes before the alterations brought forth by quality management as well as the outcomes observed at different intervals during the execution of the quality management strategy. Meanwhile, Deming (1986) puts the blame on management for plenty of quality problems in organizations hence the need for having quality products if the achievement of optimum excellent is sought. Clearly, teamwork has been highlighted in TQM plans. It has taken many shapes and forms in TQM. For instance, quality control (QC) and quality improvement of teamwork. The effect of teamwork during the execution of TQM has also been identified as a booster of motivation and effectiveness, which highlights job satisfaction (Rahman & Bullbock, 2002). Schlesinger & Heskett (1991) attributes job satisfaction to subordinates' conceptualization of service quality and their self-perception of service abilities. What is more, extensive research on employees' perceptions of the implications of TQM practices on job satisfaction has concluded that many aspects of soft TQM

practices, namely customer focus and organizational teamwork, have noticeable impacts on job satisfaction. In all, this study reiterated the mediating effect of job satisfaction in the relationship between total quality management and organizational performance.

- **Hypothesis 21: Organizational commitment mediates the relation between total quality management and organizational performance.**

The effect of the Organizational Commitment. The indirect effect is positive and significant between Total Quality Management and organizational performance H21. T-value 18,973, which is a very strong value that meets largely the requirement >1.96 (Wong, 2013), the indirect effects 95% Boot CI Bias Corrected: [LL = 0,442 UL = 0,544] indicates that confidence intervals does not entail zero demonstrating there is a mediation (Preacher and Hayes, 2008).

Most surveyed organizations recognize the significance of total quality management to employee commitment as a means to keep costs down and upgrade performance, service, and product quality. Accordingly, the success or failure of any TQM plan relies in the first place on the commitment of the top management. Furthermore, a significant result exhibits that affective commitment is very decisive when it comes to deciding to remain in the firm or not. Employees associate their willingness to stay in their jobs to their emotional affinity and attachment to their organizations. It was argued that engaged personnel in the workplace demonstrate a higher inclination to be satisfied, which intensifies their commitment to the firms and upgrade their performance. There is a consensus among organizations that committed subordinates are extremely contributive to the expansion and success of their firms. Brooks & Zeits (1999) have undertaken a comprehensive investigation of the link between employees' commitment to TQM execution among healthcare personnel. The results have provided substantial evidence of the significant relationship between commitment and organizational outcomes. Nevertheless, several researchers have provided many counter-arguments regarding the so-called positive impact/link between quality management practices and employees' satisfaction and commitment. Wood (1999), for instance, contends that many repercussions such as high pressure and heavy supervision may result from teamwork. TQM can lead to reversed outcomes if it is not well-planned and does not involve all stakeholders, including managers and employees. This paper confirms the assumption that there is a mediation role of job organizational commitment between the relationship of total quality management and organizational performance.

3 Research Implications

This study probed into the pressing issue of internal performance assessment system in Moroccan public universities. It advanced that the regular adoption and implementation of integrated measurement models namely, leadership style (MLQ 5X), quality management (TQM), organizational culture (OCAI), and balanced scorecard (BSC) will lead to the optimization of organizational performance as well as the national institutionalization and standardization of the internal performance assessment system. Yet, the revelations from respondents confirm the dearth of systematic self-evaluation as it was found that only 25 % of the surveyed higher educational institutions adopt and implement at least one of the above-mentioned tools. In the meanwhile, this study evoked that the successful initiation of these four integrated models of performance evaluation requires the combination of many tools and factors. These are adequate managerial practices, smooth bureaucratic processes, sufficient resources deployment, well-defined quality control schemes, substantial material and academic resources, strategic planning etc. The empirical findings generate significant evidence that bear important implications on:

- Mainstreaming these measurement models within HEIs.
- Investigating the impact of particular factors on organizational performance variable.
- Decorticating the multi-dimensional embodiment of organizational performance in Moroccan tertiary education in accordance with the adopted model of assessment.

HEIs that are cognizant of their leadership style are in a better position to direct and form their executives to embrace and implement the most effective leadership behaviors and managerial practices to handle employees, ensure their satisfaction, and gain their full commitment to the university's values and mission. These combined, lead to optimum individual and team performance. Therefore, the first implication entails that the execution of the MLQ 5X for the conduct of leadership assessment will provide a valid instrument to gauge leaders' behaviors and practices among educational institutions (which solves this study's related research problem related to the unclear methods for the assessment of leadership behaviors and managerial practices). The second implication entails that the establishment of the culture of management evaluation can bring forth sizeable changes in top executives' practices directed towards both the employees' needs and the sought-after performance. The third implication entails that MLQ 5X involves multi-dimensional metrics and practices that were proved to meet the vast diversity of employees' needs and requirements. Therefore, managers should use this instrument to help them adopt an eclectic approach while handling

employees. What is more, soft skills bear substantial ramifications to achieve effectiveness and upgrade performance.

There is a general conviction that the implementation of total quality management is no longer a decision left to the universities' discretion. It has become an imperative to meet the ever-changing requirements of the rapidly growing market. Therefore, HEIs, which are able to elaborate and execute well-planned TQM schemes, will benefit from the national and international recognitions and rankings and will gain the reputation and competitive advantage of providing quality education and service. Equally consequential, they make calculated and productive use of their assets thanks to the knowledge received from TQM. The proper allocation of administrative, academic, and financial resources is the most important value added of carrying out this management system. Therefore, the first implication entails that the execution of the TQM will provide a valid instrument for quality check and verification (which solves this study's related research problem regarding the unclear strategies to undertake quality management assessment). Organizations should adopt life-long quality strategies as it is considered an ongoing process. In addition, an effective quality scheme should deploy organization-wide commitment and collaboration. Finally, human resources' intellectual and professional development should be among the leaders' top priorities. The second implication entails that taking autonomous decisions related to these three aspects of TQM is the major determinant of their success, and therefore, their contribution to boosting performance. The third implication entails that TQM embodies multi-dimensional perspectives that were proved to lack efficiency regarding their effect on performance when one aspect malfunctions or does contribute positively to the whole management strategy (i.e., the financial item in this case).

Regarding organizational culture, it is categorical that HEIs identify the system of shared values and the work environment in which senior management and employees, operate and which differentiates them from other institutions. Organizational culture has been perceived as a leading-edge factor of change and influence affecting the various aspects of tertiary education including performance. Therefore, the first implication entails that the execution of the OCAI for the assessment of this taxonomy comprising four quadrants (clan, adhocracy, market, hierarchy) will provide a valid instrument to determine the dominant culture and its effect on university achievement (which solves this study's related research problem concerning the blurry or inexistent methods of detecting the prevalent culture among HEIs). The second implication entails that the affective factor is the barometer, which determines the degree of employees' comfort or not with the dominant culture that bears on their performance. This index proves to incline favorably towards clan and adhocracy types. The third implication entails

that OCAI embodies multi-dimensional dimensions that account for the hybrid environments and varied conditions prevailing in Moroccan universities.

This study has delved into examining the balanced scorecard and reflecting upon its relevance and applicability in the Moroccan tertiary education. On that account, the BSC four perspectives served to form organizational performance indicators in the research path model. Meanwhile the following implications have been drawn from the empirical evidence of this study:

- Under the **extended financial autonomy**, the Moroccan public universities can raise sufficient financial funds for the implementation of the BSC as a self-evaluation instrument of performance.
- The provision of quality education and quality service will enable Moroccan public universities to increase **customers'/stakeholders' satisfaction** and trust.
- The implementation of the BSC's critical **internal processes** will help the executives of the public universities in building solid internal day-to-day operations (quality management) and in delivering the value proposition to stakeholders.
- The implementation of the **learning and growth measures** (human capital, information capital, and organizational capital) will contribute **positively** to the upgrade of the Moroccan public universities' performance.
- The adoption and implementation of the balanced scorecard as an instrument of evaluation will strengthen quality assurance and establish the tradition of assessing the university's annual performance progress.

4 Limitations and Recommendations for Future Research:

The current research strategy fits into the cross-sectional type of surveys, which is quite distinct from its longitudinal counterpart. Having stressed that, the execution of longitudinal mixed-methods would have entailed a more effective observational process to depict the alteration of organizational performance at different intervals over time. Meanwhile, this was made impossible due to the recurrent administrative restrictions encountered throughout the studied universities. Since the cross-sectional mixed-methods deduce inferences from phenomena observation at one point in time, it was only through the integration of qualitative findings that this research could draw the diverse examples of leadership practices and patterns of affective factor that exert sizeable impact on organizational performance. Another observed limitation lies in the findings of the current study that indicate that less than 25 per cent of the sample was reported to take part in at least one of the four integrated measurement models. Meanwhile, there is the prospect that the participants may have used other forms of performance evaluation that was not covered in the present research.

The empirical evidence of this research depicted the causal paradigms delineating the impacts of the dependent variables (organizational culture, leadership, style, and total quality management) on the dependent variable (organizational performance) as they portray and bear upon the Moroccan public universities' outcome. Meanwhile, Future scholarly research could develop organizational performance management model by covering additional predictor variables to account for the internal performance assessment field of study. Potential influential factors could include turnover, payroll, knowledge management, etc. What is more, researchers could bring to focus external performance assessment along with the possible antecedents affecting this type of institutional evaluations. Alternatively, comparative studies on this similar study can be made between public and private universities in Morocco. Other participants such as students, external stakeholders, private sector executives and subordinates, and governmental agencies of assessment can take part in such studies. Unlike the cross-sectional nature of this study, longitudinal research could be carried out to account for factors affecting organizational performance in HEIs across a period of time.

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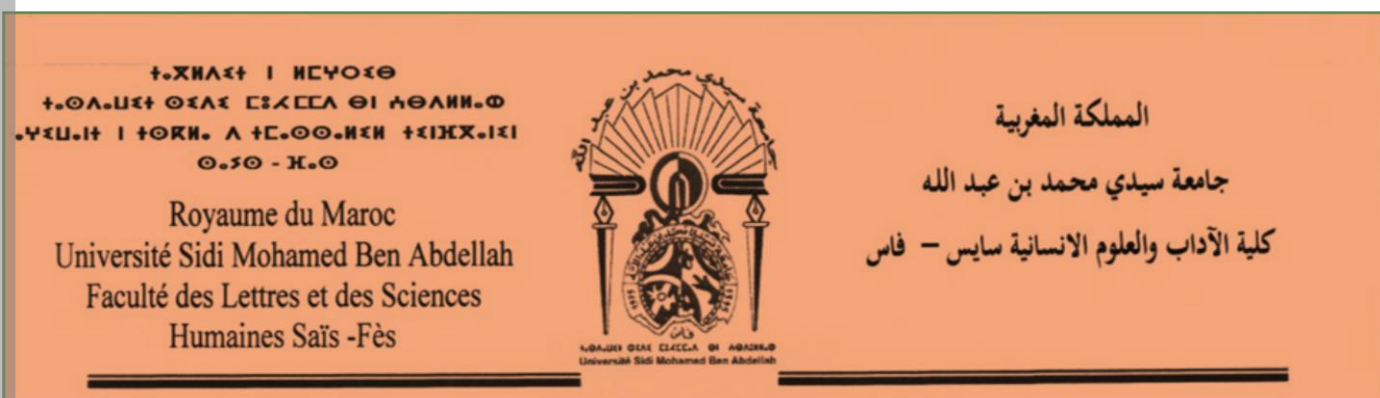
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Appendices

Appendix A

Organizational Culture Assessment Instrument (OCAI) Questionnaire

Quantitative Research : Structured Questionnaires



University Performance

Organizational Performance Assessment System through Integrated Measurement Models in Moroccan Public HEIs: A Cross-sectional Mixed-Method Study

Ph.D. Questionnaire

Centre for Doctoral Studies : “ Langues, Patrimoine et Aménagement du Territoire”.

Laboratory: Language, Literature & Communication.

Date: ____ / ____ / ____

Signature:

Researcher: Jaouad Benguit

Research Supervisor: Dr. Abderrahim El Karafa

Participation Invitation Lettre

Dear Sir/Madam,

This letter is a formal request to take part in a research paper in partial fulfillment of the requirements for Mr. Benguit's degree: Ph.D. in Educational Leadership (assessing university performance). This paper is undertaken under the supervision of Dr. Abderrahim El Karfa, Professor of Applied Linguistics and Leadership Education at the Faculty of Letters and Human Sciences, Dhar El Mehraz, Sidi Mohammed Ben Abdellah, Fes, Morocco. Therefore, you are kindly invited to contribute to this doctoral dissertation titled: *Organizational Performance Assessment System through Integrated Measurement Models in Moroccan Public Higher Education*. The purpose of this research paper is to probe into the most influential antecedents affecting the public universities achievements in Morocco. It also seeks to put into perspective the most updated approaches of performance assessment that would help policy-makers, executives, and academics to provide quality service and education. The decision to participate in this survey is left to your discretion. Meanwhile, your feedback will provide insightful data concerning the investigated issues. It is noteworthy stressing that your identity along with your organization information will be kept strictly anonymous and confidential by the researcher.

You are requested to complete the attached surveys with as much honesty as possible. The completion of the questionnaires will require approximatively 20 minutes of your valuable time.

In case of any difficulty or any need for further clarifications regarding the content of the surveys, please feel free to get in touch with the investigator.

The researcher is very grateful for taking the time to consider this study.

Sincerely,

Signature:

Jaouad Benguit,

Ph No: 06.64.89.80.18

E-mail: English-prof-klg@hotmail.fr

Top Management

Please select the management position you currently hold in your university or faculty

Name Age Sex: Female ☐ Male ☐

President of the University..... Dean

Vice-president in charge of Vice-Dean in charge of

Secretary General..... Secretary General.....

Other..... Other

Employees & Subordinates

Please select the service in which you work. In case the service is not mentioned, please specify it at the bottom of the page. This list has been designed to cover as many services as possible. N.B. the varied services between various faculties and national higher schools according to the size and the specialty of each establishment.

Name Age Sex: Female ☐ Male ☐

University Faculty of

National School Superior of Number of years in the current position:

Degrees acquired: Bachelor's degree/ Master's degree/ Doctorate/ Other degree:.....

Services attached to the Dean:

- ☐ Secretariat and order office
- ☐ Cell of Distance Education & Pedagogical Innovations.
- ☐ Communication unit.
- ☐ Audit & Quality Manager.
- ☐ Curator of the library.
- ☐ Other.....

☐ Other.....

5. Department of Financial Management and Patrimony:

- ☐ Purchasing Office
- ☐ Payments Office
- ☐ Office of Accounting & Budget.
- ☐ Other.....

Services attached to the Secretary General:

1. School Service:

- ☐ Office of LF right
- ☐ Office of LF Eco & Management
- ☐ Office of masters and LP
- ☐ Scholarship Office
- ☐ Office of Records Management
- ☐ Other.....

Services attached to the Vice Dean in charge of Continuing Education & Projects Office:

- ☐ Financial Affairs Office.
- ☐ Reception and schooling office
- ☐ On the other.....

Services attached to the Vice Dean in charge of Scientific Research and Cooperation:

- ☐ Office of Administrative Affairs of R.S. and C.
- ☐ Other.....

2. Information System Service:

- ☐ SI Administration Education and Pedagogy
- ☐ Web Administration
- ☐ Office of Statistics & Planning
- ☐ Office of maintenance and user support.
- ☐ Office of Development and Project Management.
- ☐ Other.....

Services attached to the Vice Dean in charge of Academic Affairs and Student Life:

- ☐ Office of Academic Affairs
- ☐ Service of Prog. & Exams
- ☐ Office of Student Life
- ☐ Other.....

3. Human Resources Service:

- ☐ Office of Administrative Management
- ☐ HR Development Office.
- ☐ Other.....

Services attached to the Director of Center for Doctoral Studies:

- ☐ Scientific and Academic missions of CDS.
- ☐ CDS Administrative Office.
- ☐ Other.....

4. Logistics Service and Service Management:

- ☐ Management Office

Head of department: ☐

Other service that was not mentioned above:

Organizational Culture Assessment Instrument (OCAI) Questionnaire

This survey is adapted to meet the requirements of this research paper and probe into the culture prevailing in your university. By filling in this questionnaire, you will be shedding light on the main characteristics and values that demarcate the culture of the higher educational institution you belong to. This survey holds no accurate or inaccurate responses since it starts from the belief that there is no such righteous or unrighteous culture. Universities will most probably generate wide-ranging answers concerning their prevalent characteristics, leadership, styles, governance and managerial style, strategic goals, and perceptions of success. Therefore, in order to determine and mark out the organizational culture in your institution, you are kindly requested to rate it in the suggested six question. **The rating strategy consists of dividing 100 points among four alternatives entailed in each question.** The division of the 100 points should be in accordance with your perception of the degree of similarity between each of the four alternatives and the ones of your organization. Simply put, you should assign high points to the alternative that you consider as most fitting to your organization. By way of illustration, considering question 1; if you believe that alternative A is identical to your university culture, while alternatives B and C are approximately similar, and alternative D is barely similar at all. You might assign 45 points to A, 25 points to B and 25 points to C, and assign 5 points to D. Make sure that the sum total of each question is equivalent to 100 points. You are required to rate two headings: “current rate” and “preferable rate”. Current rate denotes your reaction to the university culture, as you perceive it at present (right now). Meanwhile, the second heading “preferable rate” stands for your perception of how the university should be in five years. The word “stakeholders” refers to managers, university executives, employees, administrators, teachers, students and/or all of these individuals

A sample rating of your higher educational institution might be as follows

	Current Rate	Preferable Rate
A	45	35
B	25	20
C	25	30
D	5	15
TOTAL	100	100

I) Predominant Characteristics		Current rate	Preferable rate
A	The public university is characterized by its family like environment. Stakeholders invest themselves and contribute fully in it.	☐	☐
B	The public university is an enterprising and innovative setting where everyone is ready to take a chance and make sacrifices in pursuit of success.	☐	☐
C	The public university is oriented towards achieving outcomes. The top priority is given to achieving tasks. Stakeholders show intense competition and persistence in reaching their goals.	☐	☐
D	The public university is governed by tough formality, procedures, and structures.	☐	☐
Total			
II) Leadership Practices at the University		Current rate	Preferable rate
A	The university leadership helps others to develop through assisting, nurturing, and supporting their progress.	☐	☐
B	The university leadership provides a model of a risk-taker, innovator, and entrepreneurial mindset.	☐	☐
C	The university leadership sets top-notch norms and creates competition among students and employees to get their goals done.	☐	☐
D	The university leadership displays effective and flexible collaboration and governance styles.	☐	☐
Total			
III) Managerial Styles to deal with employees		Current rate	Preferable rate
A	Leadership managers adopt a participative managerial style in which subordinates are counselled about important issues. Decisions are made by agreement.	☐	☐
B	The university managers adopt an individualistic approach in which everyone assumes the responsibility of their actions, takes personal initiatives of innovation, and has their unique way of getting things done.	☐	☐
C	The university management style fuels competitiveness between employees, makes high demand of everyone, and adopts a go-getting behavior.	☐	☐
D	The university management style warrants secure environment to employees and require full compliance to rules, standardization and conventional networking.	☐	☐
Total			

IV) The Glue holding the university together		Current rate	Preferable rate
A	Stakeholders' high loyalty is the strong glue that holds the university together and maintains trustworthy rapports among its members. High commitment to the university goals helps consolidating affinity and consistency.	☐	☐
B	Innovative mindsets and keenness on progress consolidate the attachments that hold the university together. Standing out is the collective goal.	☐	☐
C	Achieving the university mission and goals are what bring the members together. Determination to win and aggressiveness are shared values among members.	☐	☐
D	Formalities ensure coherent rapports between the members of the university. Flexibility of management and control effectiveness are crucial for the running of the university.	☐	☐
Total			
v) Strategic Objectives/goals		Current rate	Preferable rate
A	The university places emphasis upon humane development, total trustworthiness, and engagement.	☐	☐
B	The university strives to acquire new ways and means (resources) to overcome difficult situations, think out of the box to explore new horizons, and inspect development prospects.	☐	☐
C	The university aims at reaching high quality education and being among the best higher educational institutions in the country.	☐	☐
D	The university ensures stability and constancy. Priority is given to potency, control and successful running of daily operations.	☐	☐
Total			
VI) Success Approaches		Current rate	Preferable rate
A	The university approaches success from the human resources development perspective as well as organizational commitment and concern for all stakeholders.	☐	☐
B	The university approaches success from the perspectives of acquiring the latest technology, having an efficient leadership, and intensifying creativity level.	☐	☐
C	The university approaches success from its share in the education market and a leadership with distinguished competitive advantage over the competing institutions.	☐	☐
D	The university approaches success from the degree of effectiveness, commercial commitment, flexible scheduling and competitive pricing strategy (for some paid courses especially for paid master's programs).	☐	☐
Total			

Appendix B

Multifactor Leadership Questionnaire
(MLQ 5X-Short: Leader/Self and Rater Form)

Multifactor Leadership Questionnaire
Leader Form

My Name:..... Date:.....

Organization ID:..... Leader ID:.....

This questionnaire is to describe your leadership style as you perceive it. Please answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.

Forty-five descriptive statements are listed on the following pages. Judge each statement fits you. The word “others” may mean your peers, clients, direct reports, supervisions, and/or all of these individuals.

Use the following rating scale:

	Not at all 0	Once in a while 1	Sometimes 2	Fairly often 3	Frequently If not always 4
1	I provide others with assistance in exchange for their efforts				0 1 2 3 4
2	I re-examine critical assumptions to question whether they are appropriate				0 1 2 3 4
3	I fail to interfere until problems become serious				0 1 2 3 4
4	I focus attention on irregularities, mistakes, exceptions and deviations from standards				0 1 2 3 4
5	I avoid getting involved when important issues arise				0 1 2 3 4
6	I talk about my most important values and beliefs				0 1 2 3 4
7	I am Absent when needed				0 1 2 3 4
8	I seek differing perspectives when solving problems				0 1 2 3 4
9	I talk optimistically about the future				0 1 2 3 4
10	I instill pride in others for being associated with me				0 1 2 3 4
11	I discuss In specific terms who is responsible for achieving performance targets				0 1 2 3 4
12	I wait for things to go wrong before taking action				0 1 2 3 4
13	I talk enthusiastically about what needs to be accomplished				0 1 2 3 4
14	I specify the importance of having a strong sense of purpose				0 1 2 3 4
15	I spend time teaching and coaching				0 1 2 3 4

	Not at all 0	Once in a while 1	Sometimes 2	Fairly often 3	Frequently If not always 4
16	I make clear what one can expect to receive when performance goals are achieved				0 1 2 3 4
17	I show that I am a firm believer in «It It ain't broke, don't fix it »				0 1 2 3 4
18	I go beyond self-interest for the good of the group				0 1 2 3 4
19	I treat others as individuals rather than just a member of a group				0 1 2 3 4
20	I demonstrate that problems must become chronic before I take action				0 1 2 3 4
21	I act In ways that build others respect for me				0 1 2 3 4
22	I concentrate my full attention on dealing with mistakes, complaints, and failures				0 1 2 3 4
23	I consider the moral and ethical consequences of decisions				0 1 2 3 4
24	I keep track of all mistakes				0 1 2 3 4
25	I display a sense of power and confidence				0 1 2 3 4
26	I articulate a compelling vision of the future				0 1 2 3 4
27	I direct my attention toward failures to meet standards				0 1 2 3 4
28	I avoid making decisions				0 1 2 3 4
29	I consider an individual as having different needs, abilities and aspirations from others				0 1 2 3 4
30	I get others to look at problems from many different angles				0 1 2 3 4
31	I help others to develop their strengths				0 1 2 3 4
32	I suggest new ways of looking at how to complete assignments				0 1 2 3 4
33	I delay responding to urgent questions				0 1 2 3 4
34	I emphasize the importance of having a collective sense of mission				0 1 2 3 4
35	I express satisfaction when others meet expectations				0 1 2 3 4
36	I express confidence that goals will be achieved				0 1 2 3 4
37	I am effective in meeting others job-related needs				0 1 2 3 4
38	I use methods of leadership that are satisfying				0 1 2 3 4
39	I get others to do more than they expected to do				0 1 2 3 4
40	I am effective in representing others to higher authority				0 1 2 3 4
41	I work with others in a satisfaction way				0 1 2 3 4
42	I heighten others desire to succeed				0 1 2 3 4
43	I am effective in meeting organizational requirements				0 1 2 3 4
44	I increase others willingness to try harder				0 1 2 3 4
45	I lead a group that is effective				0 1 2 3 4

Appendix C

Multifactor Leadership Questionnaire (MLQ 5X-Short: Rater Form)

Name of Leader:..... Date:.....

Organization ID:..... Leader ID:.....

This questionnaire is to describe your leadership style of the above-mentioned individual as you perceive it. Please answer all items on this answer sheet. If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank. Please answer this questionnaire anonymously.

Important (necessary for processing): which best describes you?

_____ I am at a higher organizational level than the person I am rating.

_____ The person I am rating is at my organizational level.

_____ I am at a lower organizational level than the person I am rating.

_____ Other than the above.

	Not at all 0	Once in a while 1	Sometimes 2	Fairly often 3	Frequently If not always 4
1	Provides me with assistance in exchange for my efforts				0 1 2 3 4
2	Re-examines critical assumptions to question whether they are appropriate				0 1 2 3 4
3	Fails to interfere until problems become serious				0 1 2 3 4
4	Focuses attention on irregularities, mistakes, exceptions, and deviations from standards				0 1 2 3 4
5	Avoids getting involved when important issues arise				0 1 2 3 4
6	Talks about his/her most important values and beliefs				0 1 2 3 4
7	Is Absent when needed				0 1 2 3 4
8	Seeks differing perspectives when solving problem				0 1 2 3 4
9	Talks optimistically about the future				0 1 2 3 4
10	Instills pride in me for being associated with him/her				0 1 2 3 4
11	Discusses In specific terms who is responsible for achieving performance targets				0 1 2 3 4
12	Waits for things to go wrong before taking action				0 1 2 3 4
13	Talks enthusiastically about what needs to be accomplished				0 1 2 3 4
14	Specifies the importance of having a strong sense of purpose				0 1 2 3 4
15	Spends time teaching and coaching				0 1 2 3 4

	Not at all 0	Once in a while 1	Sometimes 2	Fairly often 3	Frequently If not always 4
16	Makes clear what one can expect to receive when performance goals are achieved				0 1 2 3 4
17	Shows that he/she is a firm believer in «It ain't broke, don't fix it »				0 1 2 3 4
18	Goes beyond self-interest for the good of the group				0 1 2 3 4
19	Treats me as individuals rather than just as a member of a group				0 1 2 3 4
20	Demonstrates that problems must become chronic before taking action				0 1 2 3 4
21	Acts in ways that builds others my respect				0 1 2 3 4
22	Concentrates his/her full attention on dealing with mistakes, complaints, and failures				0 1 2 3 4
23	Considers the moral and ethical consequences of decisions				0 1 2 3 4
24	Keeps track of all mistakes				0 1 2 3 4
25	Displays a sense of power and confidence				0 1 2 3 4
26	Articulates a compelling vision of the future				0 1 2 3 4
27	Directs my attention toward failures to meet standards				0 1 2 3 4
28	Avoids making decisions				0 1 2 3 4
29	Considers me as having different needs, abilities and aspirations from others				0 1 2 3 4
30	Gets me to look at problems from many different angles				0 1 2 3 4
31	Helps me to develop my strengths				0 1 2 3 4
32	Suggests new ways of looking at how to complete assignments				0 1 2 3 4
33	Delays responding to urgent questions				0 1 2 3 4
34	Emphasizes the importance of having a collective sense of mission				0 1 2 3 4
35	Expresses satisfaction when I meet expectations				0 1 2 3 4
36	Expresses confidence that goals will be achieved				0 1 2 3 4
37	Is effective in meeting my job-related needs				0 1 2 3 4
38	Uses methods of leadership that are satisfying				0 1 2 3 4
39	Gets me to do more than I expected to do				0 1 2 3 4
40	Is effective in representing me to higher authority				0 1 2 3 4
41	Works with me in a satisfactory way				0 1 2 3 4
42	Heightens my desire to succeed				0 1 2 3 4
43	Is effective in meeting organizational requirements				0 1 2 3 4
44	Increases my willingness to try harder				0 1 2 3 4
45	Leads a group that is effective				0 1 2 3 4

Source: Avolio, B. J., & Bass, B. M. (2004). Multifactor leadership questionnaire – Manual & sampler set (3e ed.). Palo Alto, CA: Mind Garden Inc.

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Appendix D

Total Quality Management (TQM) Questionnaire

This survey starts from the legislative and regulatory frameworks integral to the national reform of higher education in Morocco. Quality management is particularly articulated in the statute No 01-00 of May 2000 on the organization of tertiary education. The integration of total quality management into the Moroccan universities comes to institute the notion of the autonomy of decision-making at all levels and aspects of the university management. This law is perfectly tailored to meet the requirements of total quality management (TQM) implementation in higher education. Therefore, this survey is based on the perception of TQM as a strategic management system which integrates the **financial** (budgeting, accounting, and funding resources), **academic** (pedagogical and instructional issues), and **administrative** (governance) reforms (articles 4 and 5 of statute 01-00). In this respect, your completion of this survey is a valuable contribution to the researcher efforts to shed light on the extent of the implementation of these three applications in your university. You are kindly requested to provide the degree of your agreement, disagreement, or neutrality depending on the suggested rating scale.

Financial Autonomy/ Applications		Strongly agree 5	Agree 4	Neutral 3	Disagree 2	Strongly disagree 1
1	Your university has enough freedom to look for additional funds aside from the sources guaranteed by the state.	5	4	3	2	1
2	Your university manages the available budgets independently.	5	4	3	2	1
3	Your university raises public funds and allocates them according to its needs and priorities.	5	4	3	2	1
4	Your university strikes a balance between receiving the state funds and raising additional revenues.	5	4	3	2	1
5	Your university has the freedom to recruit and contract with teachers and administrators according to its needs and budget.	5	4	3	2	1
6	The state predetermined budgetary posts and standards of recruitment tightly monitor the hiring of the teachers and administrative staff.	5	4	3	2	1
7	The governing boards exercise internal governance and take financial decisions related to allocating resources and preparing financial plans.	5	4	3	2	1
8	Your university has a well-defined accounting body.	5	4	3	2	1

9	The accounting body takes the form of a financial accounting unit	5	4	3	2	1
10	The absence or inefficiency of the accounting body affects the financial situation and performance of your university.	5	4	3	2	1
11	The absence of funding independence from the state affects negatively the performance of your university.	5	4	3	2	1
12	How would you rate the following manifestations of financial autonomy as the major prerequisites for an independent financial management of your university? • Free budgeting in your university. • Resilient transfer of funds. • Capacity to manage tuition fees • Ability to monitor the revenues of the university. • Clear standards for staffing.	5	4	3	2	1
13	Your university is shifting from the state oversight to self-governance.	5	4	3	2	1
Academic Autonomy/ Applications		5	4	3	2	1
1	Your university has the ability to set its standards, goals and educational programs.	5	4	3	2	1
2	Your university guarantees the freedom of individual academics to teach, research, and publish without being subject to undue or excessive interference.	5	4	3	2	1
3	There is a total freedom of carrying out research and designing lectures.	5	4	3	2	1
4	Your university has the total freedom of setting standards for students' selection and submission.	5	4	3	2	1
5	Your university has the freedom of staff recruitment.	5	4	3	2	1
6	Your university has the freedom of curriculum design and development.	5	4	3	2	1
7	Your university has the freedom to manage the modularized system and semesters, and the academic year.	5	4	3	2	1
8	Your university has the freedom to optimize scientific research.	5	4	3	2	1
9	Students have total freedom to learn and acquire knowledge.	5	4	3	2	1
10	Academic independence guarantees a favorable performance of your university.	5	4	3	2	1
Governance Autonomy/ Applications		5	4	3	2	1
1	Your university adopts a self-governance mode of management in which executives make decisions independently of the control of the higher authorities.	5	4	3	2	1
2	Your university adopts a decentralized system of management in which the university enjoys an effective decentralized government and independent administrative structures.	5	4	3	2	1
3	Your university adopts a deconcentrated style of management in which responsibilities and decision-making power are delegated to different departments and university boards.	5	4	3	2	1
4	Your university is progressing gradually from the hierarchical mode of governance to a more decentralized and deconcentrated mode of governance.	5	4	3	2	1
5	The internal governing boards have a complete freedom to govern the affairs related the university.	5	4	3	2	1
6	The adoption and implementation of the three elements of managements (deconcentration, decentralization, and self-governance) can affect positively the performance of the executive and administrative services at your university.	5	4	3	2	1

Appendix E

Balanced Scorecard (BSC) Questionnaire To Evaluate Organizational Performance

This survey seeks to assess your general knowledge of the balanced scorecard and to evaluate the possibility of its implementation in your university. The balanced scorecard (BSC) is an international system of performance management that was initiated by Kaplan & Norton in 1992. This paradigm aims at evaluating organizational performance related to four primary perspectives: financial perspective, customer perspective, internal processes perspective, and learning and growth perspective.

- Are you cognizant of the balanced scorecard as an instrument of organizational performance evaluation?

YES ☐ No ☐ Somewhat ☐

- Are you familiar with the four perspectives of the BSC?

YES ☐ No ☐ Somewhat ☐

- Which instrument of performance measurement does your university adopt?

Financial measurement ☐ Non-financial measurement ☐ unclear measurement ☐

You are kindly requested to provide the degree of your agreement, disagreement, or neutrality depending on the suggested rating scale.

BSC Perspectives in your university		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
		5	4	3	2	1
1	The Financial Perspective: in your university aims at augmenting revenues, diversifying financial resources, and exploring additional funds.	5	4	3	2	1
2	The Customer Perspective: in your university seeks to foster students' satisfaction and meet their needs by providing quality education and quality services.	5	4	3	2	1
3	The Internal Processes Perspective: in your university intends to build internal day-to-day operations, upgrade the employees' skills, and deliver quality services to students.	5	4	3	2	1
4	The Learning and growth Perspective: in your university attempts to improve human capital, information capital, and organizational capital for the purpose of providing high-level education.	5	4	3	2	1

I- Financial perspective		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
		5	4	3	2	1
1	Your university should adopt BSC as a self-assessment apparatus of financial performance.	5	4	3	2	1
2	Your organization has sufficient financial resources to implement BSC.	5	4	3	2	1
3	Your organization looks for external funding to implement BSC.	5	4	3	2	1
4	Your organization should allocate part of its annual budget to the deployment of BSC.	5	4	3	2	1
5	BSC can help reducing expenditures and saving time in your university.	5	4	3	2	1
6	BSC has the capacity to upgrade the financial performance of your university.	5	4	3	2	1

II- Customer perspective/ Students satisfaction		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
		5	4	3	2	1
1	Your university surveys the needs and expectations of the students to satisfy them.	5	4	3	2	1
2	Students (or their elected representatives) are clearly involved in the decision-making process.	5	4	3	2	1
3	Employees are well trained to deal with students' demands and exigencies.	5	4	3	2	1
4	Your university has a marketing department in the service of the students' needs and requirements.	5	4	3	2	1
5	The provision of quality service is at the heart of the university's mission to satisfy students.	5	4	3	2	1
6	The provision of quality education is at the heart of the university's mission to satisfy students.	5	4	3	2	1
7	The implementation of the BSC can improve students' satisfaction.	5	4	3	2	1

III– Learning and Growth Perspective		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
		5	4	3	2	1
	<u>1- Human capital :</u>	5	4	3	2	1
1	There are sufficient human resources in all departments.	5	4	3	2	1
2	The university management instigates employees to further their study and develop their competencies.	5	4	3	2	1
3	Continuing professional development is an integral part of the university's vision.	5	4	3	2	1
4	Incentives are provided to prompt employees to take initiatives and think out of the box.	5	4	3	2	1
5	Employees are rewarded for their hard work and dedication.	5	4	3	2	1
6	Employees are trained to assess their own performance.	5	4	3	2	1
7	Professional training is a well-established culture within your university.	5	4	3	2	1
8	The implementation of the BSC will improve human capital in your university	5	4	3	2	1
	<u>2- Information Capital :</u>	5	4	3	2	1
1	Your university possesses an efficient information system.	5	4	3	2	1
2	Your university's information system is managed by an IS department.	5	4	3	2	1
3	Your university is well equipped with appropriate technological materials and facilities.	5	4	3	2	1
4	Your university's information system provides you with up-to-date and instant information.	5	4	3	2	1
5	Your university organizes regular training courses and workshops to develop information capital.	5	4	3	2	1
6	All employees are trained to deal with the information system tools.	5	4	3	2	1
7	Employees have a complete access to the necessary information to fulfil their duties.	5	4	3	2	1
8	Students and researchers have free access to the information system.	5	4	3	2	1
9	The implementation of the BSC will improve the university's information capital system.	5	4	3	2	1
	<u>3- Organizational capital :</u>	5	4	3	2	1
1	The university's goals and mission are reflected in the employees' duties and achievements.	5	4	3	2	1
2	Employees are counselled while taking strategic decisions.	5	4	3	2	1
3	The members of your organization are motivated to carry on their tasks.	5	4	3	2	1
4	The top management holds in high regards the employees' satisfaction.	5	4	3	2	1
5	The flow of communication is smooth between the management and departments; different departments; individual members and departments.	5	4	3	2	1
6	The top management ensures an appropriate environment to employees.	5	4	3	2	1
7	The standards of performance measurement are clear to everyone at the organization.	5	4	3	2	1
8	The management-employee relationship is based on mutual respect.	5	4	3	2	1
9	The implementation of the BSC will improve the organizational capital of your university.	5	4	3	2	1

V- Internal Process Perspective		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
		5	4	3	2	1
1	There is a good interdepartmental coordination.	5	4	3	2	1
2	The top management of the university oversees the daily routine of employees.	5	4	3	2	1
3	The internal processes and activities are well defined for every individual employee and across departments.	5	4	3	2	1
4	The members of the organization receive adequate training related to their day-to-day operations and tasks.	5	4	3	2	1
5	The top management strives to deliver quality education to everyone.	5	4	3	2	1
6	The executives ensure quality management of the overall processes taking place at the university.	5	4	3	2	1
7	The internal processes, operations, and activities are measured on a regular basis.	5	4	3	2	1
8	The implementation of the BSC will improve the internal processes and operations within your university.	5	4	3	2	1

THANK YOU

Appendix F

Semi-Structured Interview 1:

University/Organizational Culture (Top Management/ Executives)



University Performance

Organizational Performance Assessment System

through Integrated Measurement Models

in Moroccan Public HEIs:

A Cross-sectional Mixed-Method Study

Ph.D. Semi-structured Interviews

Centre for Doctoral Studies : “ Langues, Patrimoine et Aménagement du Territoire”.

Laboratory: Language, Literature & Communication.

Researcher: Jaouad Benguit

Research Supervisor: Dr. Abderrahim El Karaf

Date: ____ / ____ / ____

Signature:

Informed Consent to take part in semi-structured Survey Interviews

Project Title: *Organizational Performance Assessment System through Integrated
Measurement Models in Moroccan Public Higher Education.*

The purpose of this qualitative study:

The purpose of this research paper is to probe into the most influential antecedents affecting public universities' achievements in Morocco. It also seeks to put into perspective the most updated approaches of performance assessment that would help policy-makers, executives, and academics to provide quality service and education.

Confidentiality Terms:

- I certify that I have been assured that my identity along with my organization information will be kept strictly anonymous and confidential by the researcher
- I certify that the decision to participate in this survey has been left to my discretion, and therefore, I volunteer to take part in this interview.
- I certify that I have been informed that this interview will be audiotaped.
- I certify that I have been assured that the original recording will be kept confidential.
- I certify that I have been informed that I am free to decline to answer any question and free to withdraw from the interview at any time.
- I certify that I have been informed that the outcomes of this interview can be published under different forms such as journals, books, conference synopses, etc.

I hereby declare my agreement to take part in this interview.

_____ /	_____ /	_____ /
Name of interviewee	Date	Signature
_____ /	_____ /	_____ /
Principal Interviewer	Date	Signature

Semi- Structured Interview 1:
University/Organizational Culture (Top Management/Executives)

Top Management/Executives

Demographic Survey Interview Questions:

Name: _____ Age: _____ Sex: Female ☐ Male ☐

Currently held job title: _____ Number of years in the current position: _____

University _____ Faculty of _____

National School Superior of _____ Number of years in the current position: _____

Degrees acquired: Bachelor's degree/ Master's degree/ Doctorate/ Other degree: _____

Email: _____ Phone: _____ Date: ____ / ____ / ____

Signature: _____

Introduction:

The present interview seeks to conduct an investigation of organizational culture on the grounds of Cameron & Quinn's (1999) typology. On that account, their Competitive Values Framework (CVF) model identifies four types of organizational culture: Clan (collaboration and cooperation), Hierarchy (formality and control), Adhocracy (innovation and creativity), and Market (competitive edge and results achievement). Therefore, in light of this introduction,

- How can you describe the organizational culture in your university/faculty/national school superior?
- What are the underlying values that your organization is keen on establishing and fostering?

Clan Pattern:

- Do you consider that your organization is characterized by a family-like culture, where a friendly work environment prevails? If yes, to what extent?
- Do a sense of belonging and sharing make integral parts of your organization? How?
- Is participation deemed an indispensable value in your organization? If yes, could you list a few examples?
- Do you create occasions to socialize with the members of your organization outside the workplace? If yes, could you list a few examples?

- Do you guide your subordinates towards self-managed work? If yes, how?

Hierarchy Pattern:

- Does formality constitute an integral part of your routines? If yes, could you elaborate more on the instances of formality?
- How can you describe the communication flow among the members of your organization?
- To what extent are tasks and responsibilities made quite clear to your followers?
- How flexible or inflexible is the administrative hierarchy in your organization?
- How important are the procedures and bureaucracies in your organization?

Adhocracy Pattern:

- To what extent do you consider your organization to be innovative?
- Are the members of your organization engaged in innovation plans? How?
- What actions do you initiate to encourage your subordinates to take part in the change process?
- Are they counseled and involved in the decision-making process relative to innovation schemes and projects? If yes, could you list a few examples?
- What incentives are they offered to stimulate them to contribute effectively in creative and innovative projects?

Market Pattern:

- To what extent is your organization oriented towards achieving outcomes?
- Are the members of your organization led in such a way that empowers them to achieve goals? If yes, how?
- Can you describe the competition in your organization?
- Are accountability and performance assessment essential practices in your organization?
Could you elaborate more?

In the context of the current study, it is deemed that highly satisfied employees with the workplace culture will manifest a higher commitment to their organization, which affects their performance.

Building on that,

- Do you think that the prevalent culture in your organization entices the members' satisfaction or not? How?
- How does staff satisfaction with the work environment affect performance in your organization?
- Do you think that the prevalent culture in your organization entice the members' commitment or not? How?
- How does staff commitment affect performance in your organization?

Appendix G

Semi- Structured Interview 2: University/Organizational Culture (Employees & Subordinates)

Employees & Subordinates

Demographic Survey Interview Questions:

Name: _____ Age: _____ Sex: Female Male

Currently held job title: _____ Number of years in the current position: _____

University _____ Faculty of _____

National School Superior of _____ Number of years in the current position: _____

Degrees acquired: Bachelor's degree/ Master's degree/ Doctorate/ Other degree: _____

Email: _____ Phone: _____ Date: ____ / ____ / ____

Signature: _____

Introduction:

The present interview seeks to conduct an investigation of organizational culture on the grounds of Cameron & Quinn's (1999) typology. On that account, their Competitive Values Framework (CVF) model identifies four types of organizational culture: Clan (collaboration and cooperation), Hierarchy (formality and control), Adhocracy (innovation and creativity), and Market (competitive edge and results achievement). Therefore, in light of this introduction,

- How can you describe the organizational culture in your university/faculty/national school superior?
- What are the underlying values that your organization is keen on establishing and fostering?

Clan Pattern:

- Do you feel that you are working in a family-like organization, where personal and friendly environment prevail? If yes, could you elaborate more?
- Do you feel you belong to your organization? If yes, to what extent?
- Do you participate actively in various activities in your organization? If yes, could you list a few examples?

- Do the members of your organization meet on different occasions to socialize outside the workplace? If yes, could you list a few examples?
- Do you plan and manage your day-to-day tasks and activities?
 - If yes, how do you self-organize different duties?
 - If no, to what extent does your supervisor interfere in your work?

Hierarchy Pattern:

- Are you required to comply with formality in your daily routine? If yes, could you elaborate more on the instances of formality?
- To what extent are your supervisors accessible when you need to communicate with them?
- Are tasks and responsibilities made quite clear to you? Could you elaborate more on that?
- Can you readily have access to the top executives, or must you follow the administrative hierarchy?
- To what extent do you follow the procedures and bureaucracies in your organization?

Adhocracy Pattern:

- How innovative is your work environment?
- Are you engaged in innovation and change plans? If yes, how?
- How does leadership encourage you to take part in the change process?
- Are you involved in the decision-making process relative to innovation schemes and projects? If yes, could you list a few examples?
- What incentives are you offered, in case you contribute effectively in creativity and innovation?

Market Pattern:

- To what extent are you directed towards achieving outcomes?
- Are you led in such a way that empowers you to achieve goals? If yes, how?
- Does the environment in which you operate pave the way for competition? If yes, How?
- Is your performance assessed? If yes, could you elaborate more on the aspects of assessment?

In the context of the current study, it is deemed that highly satisfied employees with the workplace culture will manifest a higher commitment to the organization, which affects their performance.

Building on that,

- Are you satisfied with the prevalent culture in your organization? If yes, to what extent?
- Does the prevalent culture affect your performance? If yes, to what extent?
- Does the prevalent culture make you committed to the organization's objectives and mission? If yes, how?

Appendix H

Semi- Structured Interview 3: Leadership Style(Top Management/Executives)

Top Management/Executives

Demographic Survey Interview Questions:

Name: _____ Age: _____ Sex: Female ☐ Male ☐

Currently held job title: _____ Number of years in the current position: _____

University _____ Faculty of _____

National School Superior of _____ Number of years in the current position: _____

Degrees acquired: Bachelor's degree/ Master's degree/ Doctorate/ Other degree: _____

Email: _____ Phone: _____ Date: ____ / ____ / ____

Signature: _____

Introduction:

This interview enquires into the Full Range Leadership theory based on Avolio & Bass's (2004) model. Accordingly, the investigator seeks to examine the extent of the embodiment of three leadership styles, namely transformational, transactional, and Laissez-faire in your organization.

Transformational Leadership:

- How do you influence your subordinates to transform into efficient members of your organization? Do you lead them by setting examples to follow (*Idealized Influence*)? How?
- How do you stimulate your subordinates to think out of the box and figure out solutions to the various problems they encounter in their daily handling of tasks (*Intellectual Stimulation*)?
- Do you take into account the personal and specific needs of each follower? If yes, how?
-How do you keep track of their progress and performance (*Individualized Consideration*)?
- How do you motivate and inspire your subordinates to prompt them to take the initiative and to be proactive (*Inspirational Motivation*)?

Transactional Leadership:

- How do you reward the accomplishment of goals and achievement of mission (*Contingent Rewards*)?
- What measures do you take against the subordinates who do not adhere to your work standards (*Management by Exception (active)*)?
- Which strategy do you prefer to deal with crises?
 - Wait-and-see ☐
 - take quick corrective actions ☐
 - Avoid any involvement ☐
- Why do you opt for this option (*Passive Management (passive)*)?

Laissez-Faire Leadership:

- How quick are you in reacting to urgent situations?
- How often do you evaluate your subordinates' performance?
- Do you guide your followers in moments of crisis? If yes, how?
- Have you set clear standards and criteria for your subordinates to follow? If yes, what are they?
- Are you on good terms with your subordinates? If yes, could you elaborate more on your relationships?

In the context of the current study, it is deemed that highly satisfied employees with the leadership style will manifest a higher commitment to their organization, which affects their performance. Building on that,

- Do you think that the prevalent leadership style in your organization boots your followers' satisfaction? How?
- How does staff satisfaction with the leadership style affect performance in your organization?
- Do you think that the prevalent leadership style in your organization entices the members' commitment or not? How?
- How does staff commitment to their leaders' vision affect performance in your organization?

Appendix I

Semi- Structured Interview 4: Leadership Style (Employees & Subordinates)

Employees & Subordinates	
Demographic Survey Interview Questions:	
Name: _____ Age: _____ Sex: Female ☐ Male ☐	
Currently held job title: _____	Number of years in the current position: _____
University _____	Faculty of _____
National School Superior of _____	Number of years in the current position: _____
Degrees acquired: Bachelor's degree/ Master's degree/ Doctorate/ Other degree: _____	
Email: _____	Phone: _____ Date: ____ / ____ / ____
Signature: _____	

Introduction:

This interview enquires into the Full Range Leadership theory based on Avolio & Bass's (2004) model. Accordingly, the investigator seeks to examine the extent of the embodiment of three leadership styles, namely transformational, transactional, and Laissez-faire in your organization.

Transformational Leadership:

- How would you describe your leaders' style to influence you and your colleagues to transform into more efficient members of the organization (*Idealized Influence*)?
- How do leaders in your organization stimulate you to think out of the box and figure out solutions to the various problems you may encounter in your daily handling of tasks (*Intellectual Stimulation*)?
- Do leaders in your organization take into account the personal and specific needs of each follower (*Idealized Influence*)? If yes, how?
- Do leaders in your organization adopt a one-to-one approach as they keep track of their subordinates' performance (*Idealized Influence*)? If yes, how?
- How do leaders in your organization motivate and inspire you to take the initiative and to be proactive (*Inspirational Motivation*)?

Transactional Leadership:

- Are you rewarded for the accomplishment of goals and achievement of mission (*Contingent Rewards*)? If yes, what kind of reward?
- What measures do leaders in your organization take against you and your subordinates in case you underperform, or do not adhere to their standards (*Management by Exception (active)*)?
- Which strategy do leaders in your organization adopt to deal with crises?
 - Wait-and-see ☐
 - take quick corrective actions ☐
 - Avoid any involvement ☐
- In your opinion, why do they opt for this option (*Passive Management (passive)*)?

Laissez-Faire Leadership:

- How often do you resort to different sources, apart from your leaders, to decide on important issues and decisions?
- How quick are leaders in your organization in reacting to urgent situations?
- How often do your leaders evaluate you and your subordinates' performance?
- How do leaders in your organizations react in moments of pressure or crisis?
- Have your leaders set clear standards and criteria for you and your colleagues to follow? If yes, what are they?
- Are leaders on good terms with all subordinates despite the inconsistencies and irregularities in your organization? If yes, could you elaborate more on your relationships?

In the context of the current study, it is deemed that highly satisfied employees with the leadership style will manifest a higher commitment to their organization, which affects their performance. Building on that,

- Do you think that the prevalent leadership style in your organization boots your satisfaction? How?
- How does satisfaction with leadership style affect your performance?
- Do you think that the prevalent leadership style entices your commitment to your organization, or not? How?
- How does your commitment to the leaders' vision affect your performance?

Appendix J

Semi- Structured Interview 5: Total Quality Management (Top Management/Executives)

Top Management/Executives	
Demographic Survey Interview Questions:	
Name: _____	Age: _____ Sex: Female ☐ Male ☐
Currently held job title: _____	Number of years in the current position: _____
University _____	Faculty of _____
National School Superior of _____	Number of years in the current position: _____
Degrees acquired: Bachelor's degree/ Master's degree/ Doctorate/ Other degree: _____	
Email: _____	Phone: _____ Date: ____ / ____ / ____
Signature: _____	

Introduction:

This interview is based on the National Charter of Education's (1999) division of higher education autonomy into financial, administrative, and academic applications within the underlying context of TQM implementation. Therefore, this qualitative study examines the assumption that the implementation of these three aspects (governance, financial, and academic applications) as part of TQM will result in an elevated performance in your organization.

- Does your organization operate within the financial, administrative, and academic autonomies? If yes, could you list a few examples?

Financial Applications:

- As a top executive of a public organization, do you have enough freedom to look for additional financial resources for your organization? If yes, what are these resources?
- To what extent can you raise external funds and allocate them according to your organization's needs and priorities?
- How can you strike a balance between receiving the state funds and raising additional revenues?
- Under your leadership, how do the governing boards exercise internal governance and take financial decisions related to allocating resources and preparing financial plans?
- Does your organization have an accounting body? If yes, what is the form of this body?

Academic Applications:

- Following the national reform recommendations, to what extent do you have the freedom to develop standards, goals, and curriculum design?
- How much autonomy does your organization enjoy in terms of conducting and publishing research?
- How do you manage the modularized system, semesters, and the academic year?
- As a top executive of a public organization, do you have the freedom to select and submit students or not? If yes, what are the adopted criteria?
- Do students have total freedom to learn and acquire knowledge? If yes, could you list a few examples?

Governance Applications:

- As a top executive of a public organization, do you have enough autonomy to make decisions independently of the control of the higher authorities (a self-governance model of management)?
- How much independence does the administrative structure in your organization have (decentralized governance)?
- Are responsibilities and decision-making power delegated to different departments and university boards? If yes, could you elaborate more on this deconcentrated style of management?

In the context of the current study, it is deemed that the application of the governance, financial, and academic patterns of autonomy as part of TQM will result in highly satisfied and committed employees, which affect organizational performance.

- Do you think that the adoption and implementation of the three elements of TQM (financial, academic, and governance autonomies) can affect satisfaction and commitment in your organization positively?
- How can the implementation of the TQM elements affect performance in your organization?

Appendix K

Semi- Structured Interview 6: Balanced Scorecard (Top Management/Executives)

Top Management/Executives	
Demographic Survey Interview Questions:	
Name: _____ Age: _____ Sex: Female ☐ Male ☐	
Currently held job title: _____ Number of years in the current position: _____	
University _____ Faculty of _____	
National School Superior of _____ Number of years in the current position: _____	
Degrees acquired: Bachelor's degree/ Master's degree/ Doctorate/ Other degree: _____	
Email: _____ Phone: _____ Date: ____ / ____ / ____	
Signature: _____	

Introduction:

This interview is based on Kaplan and Norton's (1992) Balanced Scorecard model to assess the value-added that this paradigm can create in your organization. Therefore, it goes into detail regarding the implementation of BSC's four components: financial, customer, internal process, and learning and growth perspectives to evaluate organizational performance.

- Are you familiar with the balanced scorecard as an instrument of organizational performance evaluation? -If yes, could you elaborate on it?
 - If no, the interviewer can provide you with a brief description

✓	<i>The Financial Perspective</i> aims at augmenting revenues, diversifying financial resources, and exploring additional funds.
✓	<i>The Customer Perspective</i> seeks to foster students' satisfaction and meet their needs by providing quality education and quality services.
✓	<i>The Internal Processes Perspective</i> intends to build internal day-to-day operations, upgrade the employees' skills, and deliver quality services to students.
✓	<i>The Learning and Growth Perspective</i> attempts to improve human capital, information capital, and organizational capital for the purpose of providing high-level education.

Financial Perspective:

- How critical is financial performance assessment to your administration?
- Which instrument of performance measurement do you use?
- Do you think that your organization should adopt BSC as a self-assessment tool for financial performance? If yes, what value-added can BSC bring to your organization?
- As a top executive of a public organization, can you ensure sufficient funds for the application of BSC? If yes, could you determine these sources?
- Among the benefits of adopting and implementing BSC, reducing expenditures, and saving time are particularly relevant to leverage performance in any organization. Do you agree with that? If yes, how can these assets contribute to upgrading performance in your organization?

Customer/students Perspective:

- As a top executive of a public organization, are you keen on surveying the needs and expectations of the students to satisfy them. If yes, how?
- Do you direct your employees to deal with the students' demands and exigencies? How?
- Are Students involved in the decision-making process through their elected representatives? If yes, what are the forms of this involvement?
- To what extent do you consider that providing quality service and quality education can lead to a general satisfaction in your organization?

Internal process Perspective:

- How do you manage *human capital* in your organization in terms of continuing professional development?
- How do you manage *information capital* in your organization in terms of training and accessibility to the information system (IS)?
- How do you manage *organizational capital* in your organization in terms of ensuring an appropriate environment for employees?

Learning and Growth Perspective:

- As a top executive of a public organization, do you have a clear strategy to gauge internal processes, operations, and activities in your organization regularly?
- To what extent are internal processes and activities made clear to every individual employee and across departments?
- How can you describe interdepartmental coordination?
- Are there any training schemes related to improving day-to-day operations and tasks? If yes, could you elaborate more on these schemes?

In the context of the current study, it is deemed that the execution of Balanced Scorecard (BSC) applications financial, customer, internal process, and learning and growth perspectives will result in satisfied and committed employees, which affect organizational performance.

- **Do you think that the adoption and implementation of the four elements of the BSC applications (customer, internal process, financial, and learning and growth perspectives) can affect satisfaction and commitment in your organization positively?**
- **How can the implementation of the BSC elements affect performance in your organization?**



THANK YOU

Appendix L

Quantitative Data Coding: Questionnaire 1 Organizational Culture

Curnt_Rte_Pre_Charct_Cln_cult	Current Rate of Predominant Characteristics Clan Culture
Curnt_Rte_Pre_Charct_Adho_cult	Current Rate of Predominant Characteristics Adhocracy Culture
Curnt_Rte_Pre_Charct_Mrkt_cult	Current Rate of Predominant Characteristics Market Culture
Curnt_Rte_Pre_Charct_Hirchy_cult	Current Rate of Predominant Characteristics Hierarchy Culture
Prf_Rte_Pre_Charct_Cln_cult	Preferable Rate of Predominant Characteristics Clan Culture
Prf_Rte_Pre_Charct_Adho_cult	Preferable Rate of Predominant Characteristics Adhocracy Culture
Prf_Rte_Pre_Charct_Mrkt_cult	Preferable Rate of Predominant Characteristics Market Culture
Prf_Rte_Pre_Charct_Hirchy_cult	Preferable Rate of Predominant Characteristics Hierarchy Culture
Curnt_Rte_Ldr_pract_univ_suprt_porgrs	Current Rate of Leadership Practices at the University that support progress
Curnt_Rte_Ldr_pract_univ_suprt_modl_entprnrl	Current Rate of Leadership Practices at the University that support models of entrepreneurialship
Curnt_Rte_Ldr_pract_univ_suprt_norm_gols	Current Rate of Leadership Practices at the University that support norms and goals
Curnt_Rte_Ldr_pract_univ_suprt_colbr_govce	Current Rate of Leadership Practices at the University that support collaboration and governance
Prf_Rte_Ldr_pract_univ_suprt_porgrs	Preferable Rate of Leadership Practices at the University that support progress
Prf_Rte_Ldr_pract_univ_suprt_modl_entprnrl	Preferable Rate of Leadership Practices at the University that support models of entrepreneurialship
Prf_Rte_Ldr_pract_univ_suprt_norm_gols	Preferable Rate of Leadership Practices at the University that support norms and goals
Prf_Rte_Ldr_pract_univ_suprt_colbr_govce	Preferable Rate of Leadership Practices at the University that support collaboration and governance
Curnt_Rte_Mang_styl_dl_wth_employ_partptv	Current Rate of The managerial style to deal with employees is participative
Curnt_Rte_Mang_styl_dl_wth_employ_indiv	Current Rate of The managerial style to deal with employees is individualistic
Curnt_Rte_Mang_styl_dl_wth_employ_comptv	Current Rate of The managerial style to deal with employees is competitive
Curnt_Rte_Mang_styl_dl_wth_employ_hirchl	Current Rate of The managerial style to deal with employees is hierarchical
Prf_Rte_Mang_styl_dl_wth_employ_partptv	Preferable Rate of The managerial style to deal with employees is participative
Prf_Rte_Mang_styl_dl_wth_employ_indiv	Preferable Rate of The managerial style to deal with employees is individualistic
Prf_Rte_Mang_styl_dl_wth_employ_comptv	Preferable Rate of The managerial style to deal with employees is competitive
Prf_Rte_Mang_styl_dl_wth_employ_hirchl	Preferable Rate of The managerial style to deal with employees is hierarchical
Curnt_Rte_Glu_hld_univ_tgth_stkhldr_hgh_comit	Current Rate of The glue holding the university together is stakeholders' high commitment
Curnt_Rte_Glu_hld_univ_tgth_invo_porgrs	Current Rate of The glue holding the university together is innovation and progress
Curnt_Rte_Glu_hld_univ_tgth_achv_miss_gols	Current Rate of The glue holding the university together is achieving missions and goals
Curnt_Rte_Glu_hld_univ_tgth_flx_bfrmlt	Current Rate of The glue holding the university together is flexibility in formalities
Prf_Rte_Glu_hld_univ_tgth_stkhldr_hgh_comit	Preferable Rate of The glue holding the university together is stakeholders' high commitment

Prf_Rte_Glu_hld_univ_tgth_invo_porgs	Preferable Rate of The glue holding the university together is innovation and progress
Prf_Rte_Glu_hld_univ_tgth_achv_miss_gols	Preferable Rate of The glue holding the university together is achieving missions and goals
Prf_Rte_Glu_hld_univ_tgth_flx_bfrmlt	Preferable Rate of The glue holding the university together is flexibility in formalities
Curnt_Rte_Strg_objctv_univ_devlp_hum_engag	Current Rate of The strategic objective of the university is the development of human engagement
Curnt_Rte_Strg_objctv_univ_acquist_nw resorcs	Current Rate of The strategic objective of the university is the acquisition of new resources
Curnt_Rte_Strg_objctv_univ_achv_hgh_qualt	Current Rate of The strategic objective of the university is achieving higher quality
Curnt_Rte_Strg_objctv_univ_stblty_cnstcy	Current Rate of The strategic objective of the university are stability and constancy
Prf_Rte_Strg_objctv_univ_devlp_hum_engag	Preferable Rate of The strategic objective of the university is the development of human engagement
Prf_Rte_Strg_objctv_univ_acquist_nw resorcs	Preferable Rate of The strategic objective of the university is the acquisition of new resources
Prf_Rte_Strg_objctv_univ_achv_hgh_qualt	Preferable Rate of The strategic objective of the university is achieving higher quality
Prf_Rte_Strg_objctv_univ_stblty_cnstcy	Preferable Rate of The strategic objective of the university are stability and constancy
Curnt_Rte_Succ_appr_HR_org comit_stkhldr	Current Rate of Success approaches are HR, organizational commitment, and stakeholders
Curnt_Rte_Succ_appr_effict_ldr_tchnlg	Current Rate of Success approaches are efficient leadership and technology
Curnt_Rte_Succ_appr_comptv advtg_edu_mrket	Current Rate of Success approaches is the competitive advantage in the education market
Curnt_Rte_Succ_appr_comrcl_effectv	Current Rate of Success approaches is the commercial effectiveness
Prf_Rte_Succ_appr_HR_org comit_stkhldr	Preferable Rate of Success approaches are HR, organizational commitment, and stakeholders
Prf_Rte_Succ_appr_effict_ldr_tchnlg	Preferable Rate of Success approaches are efficient leadership and technology
Prf_Rte_Succ_appr_comptv advtg_edu_mrket	Preferable Rate of Success approaches is the competitive advantage in the education market
Prf_Rte_Succ_appr_comrcl_effectv	Preferable Rate of Success approaches is the commercial effectiveness

Appendix M

Quantitative Data Coding: Questionnaire 2 Leadership Style

Transformational: Idealized Influence (Behaviour): 4 items

Trnsf_idlzd inflc_bhvr_vlu_blf	Transformational: Idealized Influence (Behaviour) values and beliefs
Trnsf_idlzd inflc_bhvr_strng_sns_prps	Transformational: Idealized Influence (Behaviour) of strong sense of purpose
Trnsf_idlzd inflc_bhvr_ethc_dec	Transformational: Idealized Influence (Behaviour) of ethical decisions
Trnsf_idlzd inflc_bhvr_clctv_sns_mssn	Transformational: Idealized Influence (Behaviour) of collective sense of mission

Transformational: Idealized Influence (Attributed): 4 items

Trnsf_idlzd inflc_atrbt_instl_prd_othr	Transformational: Idealized Influence (Attributed) of instilling pride in others.
Trnsf_idlzd inflc_atrbt_gd_grp	Transformational: Idealized Influence (Attributed) of the good of the group
Trnsf_idlzd inflc_atrbt_rspect	Transformational: Idealized Influence (Attributed) of respect
Trnsf_idlzd inflc_atrbt_pwr_cfdnc	Transformational: Idealized Influence (Attributed) of power and confidence

Transformational: Inspirational Motivation : 4 items

Trnsf_insp_motv_futr	Transformational: Inspirational Motivation of future
Trnsf_insp_motv_wh_nd_acmplsh	Transformational: Inspirational Motivation of what needs to be accomplished
Trnsf_insp_motv_futr_vison	Transformational: Inspirational Motivation of future vision
Trnsf_insp_motv_gols_achv	Transformational: Inspirational Motivation of goals achievement

Transformational: Intellectual Stimulation : 3 items

Trnsf_intlct_stml_critc_assmpt_rexam	Transformational: Intellectual Stimulation of critical assumption reexamination
Trnsf_intlct_stml_prblm_solv	Transformational: Intellectual Stimulation of problem-solving
Trnsf_intlct_stml_difr_angl_prblm	Transformational: Intellectual Stimulation look of different angles of problems

Transformational: Individual Consideration : 4 items

Trnsf_indv_cnsdr_tchg_cochg	Transformational: Individual Consideration by teaching and coaching
Trnsf_indv_cnsdr_trt_othr_indv	Transformational: Individual Consideration by treat others as individuals
Trnsf_indv_cnsdr_cnsdr_difr_ned	Transformational: Individual Consideration by considering different needs
Trnsf_indv_cnsdr_dvlp_othr_strgth	Transformational: Individual Consideration by developing other's strengths

Transactional Contingency Reward: 4 items

Trnsf_cntg_cnsdr_rwd_asist_exchg_efrt	Transactional Contingency Reward of assistance in exchange for efforts
Trnsf_cntg_cnsdr_rwd_achv_prfm_trgt	Transactional Contingency Reward of achieving performance targets
Trnsf_cntg_cnsdr_rwd_expct_aft_gols_achv	Transactional Contingency Reward of expectations after goals achievement
Trnsf_cntg_cnsdr_rwd_stisf_mtg_expct	Transactional Contingency Reward of satisfaction when meeting expectations

Transactional Management by Exception (Active) : 4 items

Trnsf_mngmt_exptn_actv_fcs_dvtn_stndrd	Transactional Management by Exception (Active) focus on deviations from standards
Trnsf_mngmt_exptn_actv_fcs_cmplt_flrs	Transactional Management by Exception (Active) focus on complaints and failures
Trnsf_mngmt_exptn_actv_fcs_trck_mstk	Transactional Management by Exception (Active) focus on tracking all mistakes
Trnsf_mngmt_exptn_actv_flrs_met_stndrd	Transactional Management by Exception (Active) of failures to meet standards

Transactional Management by Exception (Passive) : 4 items

Trnsf_mngmt_exptn_psf_flr_intrf_prbl	Transactional Management by Exception (Passive) that fails to interfere in problems
Trnsf_mngmt_exptn_psf_wt_nd_see	Transactional Management by Exception (Passive) by wait-and see
Trnsf_mngmt_exptn_psf_prctntn	Transactional Management by Exception (Passive) by procrastination
Trnsf_mngmt_exptn_psf_inrtf_chrc_prbl	Transactional Management by Exception (Passive) by interference only in chronic problems

Non-leadership Laissez-faire : 4 items

Nn_ldrshp_issz_fr_invlvmt_avdnc	Non-leadership Laissez-faire of involvement avoidance
Nn_ldrshp_issz_fr_absnc_wnh_ned	Non-leadership Laissez-faire of absence when needed
Nn_ldrshp_issz_fr_dcisn_avdnc	Non-leadership Laissez-faire of decision-making avoidance
Nn_ldrshp_issz_fr_ugnt_qst_dly	Non-leadership Laissez-faire of urgent questions delay

Satisfaction with leadership: 2 items

Stisf_wth_ldrshp_mthd	Satisfaction with leadership's methods
Stisf_wth_ldrshp_wrk	Satisfaction with leadership's work

Extra Effort: 3 items

Extr_efrt_dg_mr-thn_expt	Extra Effort by doing more than expected
Extr_efrt_hght_dsr_sucd	Extra Effort by heightening desire to succeed
Extr_efrt_try_hdr	Extra Effort by trying harder

Effectiveness: 4 items

Effectvss_metng_jb_ned	Effectiveness in meeting job-related needs
Effectvss_rprstg_hghr_athrty	Effectiveness in representing higher authority
Effectvss_metng_org_rqrmt	Effectiveness in meeting organizational requirements
Effectvss_led_grp_efctv	Effectiveness in leading a group that is effective

Appendix N

Quantitative Data Coding: Questionnaire 3 Total Quality Management (TQM)

Financial Autonomy

TQM_fincl_auto_aditnl_fnds	Total Quality Management: Financial autonomy to manage additional funds
TQM_fincl_auto_mng_avbl_bdgts	Total Quality Management: Financial autonomy to manage available budgets
TQM_fincl_auto_aloct_fnd	Total Quality Management: Financial autonomy to allocate funds
TQM_fincl_auto_rcv_stat_extr_fnds	Total Quality Management: Financial autonomy to receive the state and extra funds
TQM_fincl_auto_rcrut_employ	Total Quality Management: Financial autonomy to recruit employees
TQM_fincl_auto_rcrut_mntrd_stat	Total Quality Management: Financial autonomy to recruit is monitored by the state
TQM_fincl_auto_undrtk_govng_brds	Total Quality Management: Financial autonomy is undertaken by the governing boards
TQM_fincl_auto_ensrd_acnt_bdy	Total Quality Management: Financial autonomy is ensured by an accounting body.
TQM_fincl_auto_ensrd_fincl_acc_bdy	Total Quality Management: Financial autonomy is ensured by a financial accounting unit
TQM_fincl_auto_afft_absnc_inffncy_acnt_bdy	Total Quality Management: Financial autonomy is affected by the absence or inefficiency of the accounting body.
TQM_fincl_auto_afft_absnc_fnds	Total Quality Management: Financial autonomy is affected by the absence of funds.
TQM_fincl_auto_fr_bdget	Total Quality Management: Financial autonomy of free budgeting
TQM_fincl_auto_trnsfr_fnds	Total Quality Management: Financial autonomy of transfer of funds
TQM_fincl_auto_mng_tuton_fee	Total Quality Management: Financial autonomy to manage tuition fees
TQM_fincl_auto_mng_rvnue	Total Quality Management: Financial autonomy to manage the revenues
TQM_fincl_auto_montr_stffg	Total Quality Management: Financial autonomy to monitor staffing
TQM_fincl_auto_mng_univ_shft_stat_ovrsght_gov	Total Quality Management: Financial autonomy to manage the university shift from the state oversight to self-governance.

Academic Autonomy

TQM_acdmc_auto_stnrd_gols_prgrm	Total Quality Management: Academic autonomy to set standards, goals and programs
TQM_acdmc_auto_tech_pblsh	Total Quality Management: Academic autonomy to teach and publish
TQM_acdmc_auto_cndct_rsrch	Total Quality Management: Academic autonomy to conduct research
TQM_acdmc_auto_std_sbmsn	Total Quality Management: Academic autonomy of students' submission.
TQM_acdmc_auto_stf_rcrut	Total Quality Management: Academic autonomy of staff recruitment
TQM_acdmc_auto_crclm_dsgn	Total Quality Management: Academic autonomy of curriculum design
TQM_acdmc_auto_acdmc_yr	Total Quality Management: Academic autonomy to manage academic year.
TQM_acdmc_auto_otpmz_rsrch	Total Quality Management: Academic autonomy to optimize research
TQM_acdmc_auto_std_aqr_kwlg	Total Quality Management: Academic autonomy of students to acquire knowledge

TQM_acdmc_auto_grnt_fav_prf_univ	Total Quality Management: Academic autonomy guarantees a favorable performance of your university

Governance Autonomy

TQM_gov_auto_slf_gov_mde	Total Quality Management: governance autonomy of self-governance mode
TQM_gov_auto_dcenrlzd_sysm	Total Quality Management: governance autonomy of a decentralized system
TQM_gov_auto_dconrttd_sysm	Total Quality Management: governance autonomy of a deconcentrated system
TQM_gov_auto_shft_mde_gov	Total Quality Management: governance autonomy shifts the mode of governance
TQM_gov_auto_mngd_intrnl_gov_brds	Total Quality Management: governance autonomy is managed by the internal governing boards
TQM_gov_auto_afct_pstvly_perf	Total Quality Management: governance autonomy can affect positively performance

Appendix O

Quantitative Data Coding: Questionnaire 4 Balanced Scorecard (BSC)

BSC Perspectives in your university

BSC_prspctv_univ_fincl_prspctv	BSC Perspectives in your university: <i>The Financial Perspective</i>
BSC_prspctv_univ_custmr_prspctv	BSC Perspectives in your university: <i>The Customer Perspective</i>
BSC_prspctv_univ_intr_prc_prspctv	BSC Perspectives in your university: <i>The Internal Processes Perspective</i>
BSC_prspctv_univ_lrng_grwth_prspctv	BSC Perspectives in your university: <i>The Learning and growth Perspective</i>

Balanced scorecard Financial perspective

BSC_fincl_prspctv_adpt_slf_mngt	Balanced scorecard: Financial perspective adoption for self-assessment
BSC_fincl_prspctv_implt_rsoc_sufncy	Balanced scorecard: Financial perspective implementation resources sufficiency
BSC_fincl_prspctv_implt_extrl_fnd	Balanced scorecard: Financial perspective implementation needs external funding
BSC_fincl_prspctv_implt_anul_bgt	Balanced scorecard: Financial perspective implementation needs annual budget
BSC_fincl_prspctv_rduc_expndtr	Balanced scorecard: Financial perspective reduction of expenditures
BSC_fincl_prspctv_ugrd_fncnl_prf	Balanced scorecard: Financial perspective upgrade the financial performance

Balanced scorecard Students satisfaction

BSC_std_stsf_srvy_expt	Balanced scorecard: Students satisfaction by surveying their expectations
BSC_std_stsf_invlv_desic_mkg	Balanced scorecard: Students satisfaction by involving them in the decision-making process.
BSC_std_stsf_dlg_std_dmnd	Balanced scorecard: Students satisfaction by dealing with students' demands
BSC_std_stsf_mrktg_dpmtmnt	Balanced scorecard: Students satisfaction by a marketing department
BSC_std_stsf_giv_qulty_srvc	Balanced scorecard: Students satisfaction by giving them a quality service
BSC_std_stsf_giv_qulty_educ	Balanced scorecard: Students satisfaction by giving them a quality education
BSC_std_stsf_ensrd_implmnt_BSC	Balanced scorecard: Students satisfaction can be ensured by implementing BSC

Learning and Growth Perspective

a-Human Capital

BSC_lrng_grwth_prspctv_hmn_cptl_dpmt_sufncy	Balanced scorecard: Learning and Growth Perspective Human capital department sufficiency
BSC_lrng_grwth_prspctv_hmn_cptl_dvlp_cmptc	Balanced scorecard: Learning and Growth Perspective Human capital development of competencies
BSC_lrng_grwth_prspctv_hmn_cptl_cntng_prof_dvlpmnt	Balanced scorecard: Learning and Growth Perspective Human capital continuing professional development
BSC_lrng_grwth_prspctv_hmn_cptl_crtvty_inctv	Balanced scorecard: Learning and Growth Perspective Human capital creativity incentives
BSC_lrng_grwth_prspctv_hmn_cptl_rwrdr	Balanced scorecard: Learning and Growth Perspective Human capital reward
BSC_lrng_grwth_prspctv_hmn_cptl_slf_asesmnt	Balanced scorecard: Learning and Growth Perspective Human capital self-assessment
BSC_lrng_grwth_prspctv_hmn_cptl_prof_trng	Balanced scorecard: Learning and Growth Perspective Human capital professional training
BSC_lrng_grwth_prspctv_hmn_cptl_imprvmnt	Balanced scorecard: Learning and Growth Perspective Human capital improvement

b-Information Capital

BSC_lrng_grwth_prspctv_Info_cptl_efcnt_info_sys	Balanced scorecard: Learning and Growth Perspective Information capital efficient information system
BSC_lrng_grwth_prspctv_Info_cptl_efcnt_IS_dprtm	Balanced scorecard: Learning and Growth Perspective Information capital efficient IS department
BSC_lrng_grwth_prspctv_Info_cptl_mdrn_tech_fclts	Balanced scorecard: Learning and Growth Perspective Information capital modern technology and facilities.
BSC_lrng_grwth_prspctv_Info_cptl_updt_istnt_info	Balanced scorecard: Learning and Growth Perspective Information capital update and instant information.
BSC_lrng_grwth_prspctv_Info_cptl_rglr_trng	Balanced scorecard: Learning and Growth Perspective Information capital regular training
BSC_lrng_grwth_prspctv_Info_cptl_trng_IS	Balanced scorecard: Learning and Growth Perspective Information capital training on IS
BSC_lrng_grwth_prspctv_Info_cptl_Ttl_acss	Balanced scorecard: Learning and Growth Perspective Information capital total access
BSC_lrng_grwth_prspctv_Info_cptl_std_tchr_fr_acss	Balanced scorecard: Learning and Growth Perspective Information capital students and researchers' free access
BSC_lrng_grwth_prspctv_Info_cptl_imprvmnt	Balanced scorecard: Learning and Growth Perspective Information capital improvement

c-Organizational Capital

BSC_lrng_grwth_prspctv_org_cptl_gols_missn	Balanced scorecard: Learning and Growth Perspective organizational capital goals and mission
BSC_lrng_grwth_prspctv_org_cptl_cnsel_employ_dcsn	Balanced scorecard: Learning and Growth Perspective organizational capital counselling employees in decisions
BSC_lrng_grwth_prspctv_org_cptl_employ_mtvtn	Balanced scorecard: Learning and Growth Perspective organizational capital employees' motivation
BSC_lrng_grwth_prspctv_org_cptl_employ_stsf	Balanced scorecard: Learning and Growth Perspective organizational capital employees' satisfaction
BSC_lrng_grwth_prspctv_org_cptl_smth_com	Balanced scorecard: Learning and Growth Perspective organizational capital smooth communication
BSC_lrng_grwth_prspctv_org_cptl_aprprt_envrmt	Balanced scorecard: Learning and Growth Perspective organizational capital appropriate environment
BSC_lrng_grwth_prspctv_org_cptl_perf_stnds	Balanced scorecard: Learning and Growth Perspective organizational capital performance standards
BSC_lrng_grwth_prspctv_org_cptl_mngmt_employ_rlshp	Balanced scorecard: Learning and Growth Perspective organizational capital management-employee relationship
BSC_lrng_grwth_prspctv_org_cptl_imprvmnt	Balanced scorecard: Learning and Growth Perspective organizational capital improvement

Internal Process Perspective

BSC_prc_prspctv_intrdptmtl_crdntn	Balanced scorecard: Internal Process Perspective interdepartmental coordination
BSC_prc_prspctv_dly_rtn_sprvsn	Balanced scorecard: Internal Process Perspective daily routine supervision
BSC_prc_prspctv_wl_dfnd_employ	Balanced scorecard: Internal Process Perspective is well defined to employees
BSC_prc_prspctv_dy_t_dy_oprt_trng	Balanced scorecard: Internal Process Perspective day-to-day operations training
BSC_prc_prspctv_qlty_edu	Balanced scorecard: Internal Process Perspective quality education
BSC_prc_prspctv_qlty_mngmt	Balanced scorecard: Internal Process Perspective quality management
BSC_prc_prspctv_rglr_msrmnt	Balanced scorecard: Internal Process Perspective regular measurement
BSC_prc_prspctv_imprvmnt	Balanced scorecard: Internal Process Perspective improvement

Appendix P

Demande d'entretiens et de diffusion des questionnaires au sein des Facultés et Écoles Nationales Supérieures

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Faculté des lettres et des Sciences Humaines
Saïs – Fès.

L'école Nationale de... /Faculté ...
À l'attention de Monsieur/Madame le directeur/la directrice

Le : 04/03/19 – Fès/Mekhnès/Rabat

Objet : Demande d'entretiens et de diffusion des questionnaires au sein de....

Monsieur, Madame,

Étant doctorant en sixième année de doctorat, je sollicite de votre bienveillance l'autorisation de réaliser des entretiens avec vous et/ou avec les dirigeants de votre établissement et de diffuser des questionnaires dans le but d'accumuler des informations auprès des employés de votre institution.

Cette lettre est une demande formelle de prendre part à une thèse en vue de l'accomplissement partiel des exigences pour le diplôme de M. Benguit : Ph.D. en leadership éducatif (l'évaluation de la performance universitaire). Par conséquent, vous êtes invités à contribuer à cette thèse de doctorat intitulée : « *Système d'évaluation de la performance organisationnelle à travers des modèles de mesure intégrés dans l'enseignement supérieur public marocain* ». Le but de cette étude est de sonder les antécédents les plus influents affectant la performance des universités publiques au Maroc. Il vise également à mettre en perspective les approches les plus récentes de l'évaluation des performances qui aideraient les responsables politiques, les dirigeants et les universitaires à fournir un service et une éducation de qualité.

J'envisage de réaliser mon recueil de données entre le 6 et le 11 novembre.

Je vous remercie de l'attention que vous voudrez bien porter à ma demande et vous prie de croire monsieur le directeur, à l'expression de mes respectueuses salutations.

Cordialement,

Signature :

Pièces jointe : Exemplaires d'entretiens (en Arabe et Français)
Exemplaires de Questionnaires (en Français)
Autorisation administrative de réaliser des recherches sur terrains.

Appendix Q

1.1 Universities' Subordinates Profile, Frequency, and Percentage Information

Table 32: Universities' Subordinates Profile, Frequency, and Percentage Information (n= 613)

Category	Age				Sex		Education Level				Seniority in the position			
Subordinates	26-35	36-45	46-55	56-60	Female	Male	Bachelor	Masters	PHD	Other degrees	btw2 and 4	btw5 and10	btw10 and14	14 and over
Frequencies	155	182	149	127	340	273	245	201	77	90	244	213	103	53
Overall Percentages	25%	30%	24%	21%	55%	45%	40%	33%	13%	15%	40%	35%	17%	9%
<i>Services attached to the Dean</i>	29	31	20	26	61	45	26	41	22	17	41	25	20	20
<i>Group Percentage</i>	5%	5%	3%	4%	10%	7%	4%	7%	4%	3%	7%	4%	3%	3%
Secretariat and order office	31,03%	29,03%	25,00%	30,77%	26,23%	33,33%	26,92%	26,83%	36,36%	29,41%	26,83%	20,00%	55,00%	20,00%
Cell of Distance Education & Pedagogical Innovations.	13,79%	3,23%	10,00%	30,77%	14,75%	13,33%	26,92%	7,32%	4,55%	23,53%	12,20%	32,00%	5,00%	5,00%
Communication unit.	17,24%	6,45%	5,00%	23,08%	11,48%	15,56%	23,08%	12,20%	0,00%	17,65%	14,63%	8,00%	15,00%	15,00%
Audit & Quality Manager.	31,03%	38,71%	55,00%	15,38%	37,70%	28,89%	0,00%	46,34%	59,09%	23,53%	34,15%	36,00%	15,00%	50,00%
Curator of the library.	6,90%	16,13%	5,00%	0,00%	8,20%	6,67%	19,23%	7,32%	0,00%	0,00%	7,32%	4,00%	10,00%	10,00%
Other	0,00%	6,45%	0,00%	0,00%	1,64%	2,22%	3,85%	0,00%	0,00%	5,88%	4,88%	0,00%	0,00%	0,00%
<i>Services attached to the Secretary General</i>														
1. School Service:	11	10	13	8	26	16	18	12	3	9	20	10	9	3
<i>Group Percentage</i>	2%	2%	2%	1%	4%	7%	3%	2%	0%	1%	5%	5%	3%	4%
Office of LF right	18,18%	10,00%	23,08%	0,00%	15,38%	12,50%	16,67%	16,67%	0,00%	11,11%	15,00%	10,00%	0,00%	66,67%
Office of LF Eco & Management	18,18%	30,00%	15,38%	12,50%	19,23%	18,75%	11,11%	25,00%	33,33%	22,22%	5,00%	50,00%	22,22%	0,00%
Office of masters and LP	27,27%	10,00%	30,77%	25,00%	26,92%	18,75%	16,67%	33,33%	33,33%	22,22%	30,00%	20,00%	22,22%	0,00%
Scholarship Office	18,18%	10,00%	0,00%	37,50%	11,54%	18,75%	22,22%	0,00%	0,00%	22,22%	15,00%	20,00%	11,11%	0,00%
Office of Records Management	18,18%	40,00%	23,08%	25,00%	23,08%	31,25%	27,78%	25,00%	33,33%	22,22%	35,00%	0,00%	33,33%	33,33%
Other	0,00%	0,00%	7,69%	0,00%	3,85%	0,00%	5,56%	0,00%	0,00%	0,00%	0,00%	0,00%	11,11%	0,00%
2. Information System Service:	19	16	18	18	39	32	32	20	9	10	30	17	17	7
<i>Group Percentage</i>	3%	3%	3%	3%	5%	6%	5%	3%	1%	2%	3%	2%	1%	0%
SI Administration Education and Pedagogy	47,37%	43,75%	38,89%	44,44%	48,72%	37,50%	34,38%	45,00%	77,78%	40,00%	40,00%	41,18%	52,94%	42,86%
Web Administration	5,26%	12,50%	22,22%	16,67%	15,38%	12,50%	18,75%	15,00%	11,11%	0,00%	16,67%	17,65%	5,88%	14,29%
Office of Statistics & Planning	26,32%	6,25%	16,67%	22,22%	12,82%	25,00%	25,00%	20,00%	0,00%	10,00%	20,00%	23,53%	17,65%	0,00%
Office of maintenance and user support.	15,79%	25,00%	5,56%	16,67%	15,38%	15,63%	15,63%	15,00%	0,00%	30,00%	10,00%	11,76%	17,65%	42,86%
Office of Development and Project Management.	5,26%	12,50%	16,67%	0,00%	7,69%	9,38%	6,25%	5,00%	11,11%	20,00%	13,33%	5,88%	5,88%	0,00%
3. Human Resources Service:	4	4	6	4	13	5	8	5	1	4	7	6	3	2
<i>Group Percentage</i>	1%	1%	1%	1%	2%	1%	1%	1%	0%	1%				
Office of Administrative Management	50,00%	25,00%	66,67%	75,00%	61,54%	40,00%	62,50%	60%	0%	50%	57,14 %	50%	33,33 %	100%
HR Development Office.	50,00%	75,00%	33,33%	25,00%	38,46%	60,00%	37,50%	40%	100%	50%	42,85	50%	66,66%	0%
Other	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0%	0%	0%	0%	0%	0%	0%
4. Logistics Service and Service Management:	3	2	5	1	5	6	6	3	1	1	4	5	1	1
<i>Group Percentage</i>	0%	0%	1%	0%	1%	1%	1%	0%	0%	0%	1%	1%	0%	0%
Management Office	100%	100%	60%	100%	100%	66,67%	66,67%	100%	100%	100%	75%	80%	100%	100%

Other	0%	0%	40%	0%	0%	33,33%	33,33%	0%	0%	0%	25%	20%	0%	0%
<u>Department of Financial Management and Patrimony</u>	11	22	21	6	33	27	30	19	3	8	15	34	5	6
<u>Group Percentage</u>	2%	4%	3%	1%	5%	4%	5%	3%	0%	1%	2%	6%	1%	1%
Purchasing Office	45,45%	40,91%	38,10%	50,00%	45,45%	37,04%	46,67%	36,84%	33,33%	37,5%	40,00%	38,24%	20%	83,33%
Payments Office	36,36%	31,82%	28,57%	33,33%	33,33%	29,63%	36,67%	31,58%	0,00%	25%	26,67%	35,29%	40%	16,67%
Office of Accounting & Budget.	18,18%	27,27%	33,33%	16,67%	21,21%	33,33%	16,67%	31,58%	66,67%	37,5%	33,33%	26,47%	40%	0,00%
Other	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0%	0,00%	0,00%	0%	0,00%
<u>Services attached to the Vice Dean in charge of Continuing Education & Projects Office</u>	14	16	10	19	26	33	21	23	8	7	21	28	7	3
<u>Group Percentage</u>	2%	3%	2%	3%	4%	5%	3%	4%	1%	1%	3%	5%	1%	0%
Financial Affairs Office.	35,71%	50,00%	40,00%	31,58%	34,62%	42,42%	33,33%	52,17%	37,50%	14,29%	42,86%	39,29%	28,57%	33,33%
Reception and schooling office	21,43%	6,25%	60,00%	42,11%	26,92%	33,33%	23,81%	34,78%	37,50%	28,57%	23,81%	28,57%	42,86%	66,67%
Other	42,86%	43,75%	0,00%	26,32%	38,46%	24,24%	42,86%	13,04%	25,00%	57,14%	33,33%	32,14%	28,57%	0,00%
<u>Services attached to the Vice Dean in charge of Scientific Research and Cooperation</u>	16	36	22	19	56	37	48	26	11	8	44	37	11	1
<u>Group Percentage</u>	3%	6%	4%	3%	9%	6%	8%	4%	2%	1%	7%	6%	2%	0%
Office of Administrative Affairs of R.S. and C.	43,75%	63,89%	86,36%	75,00%	66,07%	83,78%	66,67%	69,23%	100,00%	87,50%	65,91%	86,49%	63,64%	0,00%
Other	56,25%	36,11%	13,64%	25,00%	33,93%	16,22%	33,33%	30,77%	0,00%	12,50%	34,09%	13,51%	36,36%	100,00%
<u>Services attached to the Vice Dean in charge of Academic Affairs and Student Life</u>	27	24	15	10	38	38	33	21	4	18	33	29	12	2
<u>Group Percentage</u>	4%	4%	2%	2%	6%	6%	5%	3%	1%	3%	5%	5%	2%	0%
Office of Academic Affairs	29,63%	20,83%	66,67%	30,00%	44,74%	23,68%	33,33%	38,10%	25,00%	33,33%	21,21%	41,38%	50,00%	50,00%
Service of Prog. & Exams	37,04%	37,50%	13,33%	70,00%	23,68%	50,00%	45,45%	28,57%	0,00%	38,89%	42,42%	31,03%	41,67%	0,00%
Office of Student Life	22,22%	33,33%	13,33%	0,00%	23,68%	18,42%	18,18%	23,81%	25,00%	22,22%	30,30%	17,24%	8,33%	0,00%
Other	11,11%	8,33%	6,67%	0,00%	7,89%	7,89%	3,03%	9,52%	50,00%	5,56%	6,06%	10,34%	0,00%	50,00%
<u>Services attached to the Director of Center for Doctoral Studies</u>	21	21	19	16	43	34	23	31	15	8	29	22	18	8
<u>Group Percentage</u>	3%	3%	3%	3%	7%	6%	4%	5%	2%	1%	5%	4%	3%	1%
Scientific and Academic missions of CDS.	23,81%	42,86%	57,89%	25,00%	39,53%	35,29%	30,43%	35,48%	33,33%	75,00%	41,38%	22,73%	38,89%	62,50%
CDS Administrative Office.	38,10%	47,62%	15,79%	50,00%	34,88%	41,18%	56,52%	29,03%	40,00%	12,50%	31,03%	45,45%	38,89%	37,50%
Other	38,10%	9,52%	26,32%	25,00%	25,58%	23,53%	13,04%	35,48%	26,67%	12,50%	27,59%	31,82%	22,22%	0,00%