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**The Effect of eGovernment Whole-of-Government Approach on Good Governance: The Initiative of the Integrated System of Expenditure Management in Morocco**

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**The Effect of eGovernment Whole-of-Government Approach  
on Good Governance: The Initiative of the Integrated System  
of Expenditure Management in Morocco**

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## Dedication

To the Glory of Allah, I would like to dedicate the successful completion of my Doctorate degree to my dear wife and son, who supported my absence at home. I dedicate my dissertation work to my family and many friends. Special feelings of gratitude go to my loving parents, Zineb and Abdelkader whose words of encouragement and push for hard work ring always in my ears. I dedicate this work to my sister and brothers, who have always supported me. Special thanks go to Dr. Asmaa Al Merghni from Egypt, I am indebted to her for her heartwarming, insightful, and thoughtful online courses in statistics and data analysis skills, Mr. Brahim El Boukhari for his proofreading, and Mr. Ouadie Rouak for helping me to master LaTeX writing skills. I dedicate this work and give special thanks to my supervisor Dr. Abdelhamid Nfissi for his guidance and supervision.

## Declaration

I hereby declare that this dissertation, submitted in partial fulfillment of the requirements for the degree of Doctorate of Philosophy, under the title:

**The Effect of eGovernment Whole-of-Government Approach on Good Governance: The Initiative of The Integrated System of Expenditure Management in Morocco.**

embodies my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person.

Signed: Said Azelmad

Date: 17/04/2020

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## Abstract

**P**ublic administration reforms, in Morocco, called for the use of ICTs to connect administrations in a Whole-of-Government Approach, building a culture of collaboration and Good Governance. Indeed, Coordination Theory supports the networked bureaucracy, as a catalyst for heterogeneous multi-stakeholder management, internal auditing and synergy. Institutional networked coordination is believed to increase interoperability and integration among offices for transparency and mutual accountability. This mutual collaboration (G<sub>2</sub>G) that is deemed to better governance, streamline workflows and reduce duplication of workflows and tasks. However, stove-piped management remains always a bad omen for networked governance for its single-purpose management. It is believed to separate offices in corrupted dispersed silos and bureaucracies, operating in ambiguity, red tape and bad governance (United Nations, 2014). In this direction, the Integrated System of Expenditure Management (GID) is a late successful initiative in Morocco, which is summoned up by the researcher as a case for study to examine empirically the endeavours of eGovernment Whole-of-Government Approach for Good Governance in public Administration. The study adopted for an exploratory sequential design to compare the de jure existing official documentation and the de facto realities of the phenomenon. A mixed methods approach was used to measure the effect of eGovernment Whole-of-Government Approach on Good Governance ethics in back offices. Indeed, the qualitative phase has triangulated methods of document analysis, focus group discussions, and members checking to answer the qualitative research questions from different angles. The qualitative phase allowed producing a reliable and valid instrumentation, generalizable into a group of participants at the quantitative phase. Therefore, results from a survey of public agents, using the GID system in Morocco, were collected (n =253) to empirically analyse the effect of eGovernment Whole-of-Government Approach on Good Governance, using SPSS and PLS-SEM. Importance-Performance Analysis on PLS incorporated the voice of the GID users into the Importance-Performance

Map to look for less performing constructs but with high importance in the making of Good Governance ethics in back office deliveries.

The study revealed that there is a highly significant and positive effect of eGovernment Whole-of-Government Approach on Good Governance in public administration. Furthermore, the hypothesized effect relationships between Good Governance variables under the effect of eGovernment Whole-of-Government Approach all marked significant and positive, indicating that Good Governance is a beautiful embroidery, knit with moral ethics that sustain and maintain each other for the good management of public services. The study indicated that all the important constructs are also performing well in the making of their target constructs, under the effect of eGov WGA; therefore, there is no predecessor worth to focus on for managerial actions in the construction of Good Governance, by decision-makers of the system GID in Morocco. At the end, the findings summarized that the de jure rules begin to be translated into de facto outcomes and realities to reform and modernize administration and management in Morocco, and that eGovernment Whole-of-Government Approach is now a de facto reality, and not an illusion. Therefore, the eGovernment policy after *the program of eMorocco 2013* begins to give its fruits in enhancing governance, management and public service quality.

قام المغرب بالعديد من الإصلاحات الإدارية من أجل الرفع من جودة الخدمات المقدمة للمرتفقين بالمكاتب الأمامية ، إلا أن تطوير جودة أداء المكاتب الأمامية Front Offices أصبح مرهونا أيضا بتطوير التبادل البيئي Interoperability بين المكاتب الخلفية Back Offices من أجل توافقية وتشاركية فعالة تنبني على خلق التعاون والتواصل والاندماجية Integration في تدير الخدمات الإدارية وإنعاش ثقافة الأخلاق والحكمة الحيدة بالمرفق العمومي، حتى يكون له وقع فعال على تقديم الخدمة في الشبايبك الأمامية.

يسعى التدير المندمج بين الإدارات العمومية إلى التخفيف من حدة البيروقراطية والتوجه الإنفرادي Silo-based approach للمؤسسات العمومية من أجل تنزيل السياسات اللامركزية ، عبر إشراك الإدارات المحلية في بناء الخدمات والسياسات الإستراتيجية الوطنية لترسيخ مبادئ الحكامة الحيدة Good Governance بين المؤسسات العمومية .

لذا، تقوم هذه الدراسة على بحث مساعي وأهداف الحكومة الإلكترونية eGovernment لتحسين آليات الحكامة الحيدة من خلال تديرها المندمج بين الإدارات العمومية G2G .

بعد تجميع المعطيات النوعية والكمية وتفرغها على البرامج الإحصائية ، قام الطالب بإستعمال إختبار نمذجة المعادلة الهيكلية Structural Equation Modeling SEM على برنامج SmartPLS لقياس الفرضيات المقترحة في هذه الأطروحة ، كإختبار ينتمي للجيل الثاني من الإحصائيات نظرا لقدرته على فحص مجموعة من المتغيرات الكامنة Latent Variables في آن واحد، والذي يناسب بشدة نوعية الإستهبان المحدث في هذه الدراسة ، والذي يقيس الطالب من خلاله درجة رضى مستخدمي التدير المندمج للنفقات وآثاره على معايير الحكامة الحيدة بالادارة العمومية بالمغرب.

بحيث سيمكن إختبار نمذجة المعادلة الهيكلية أيضا من تحليل المسار Path Analysis بين جميع المتغيرات المؤثرة و المتغيرات النتيجة في آن واحد، بحيث يسمح بوجود علاقات إرتباطية Multicollinearity بين المتغيرات، على عكس إختبار الإنحدار المتعدد Multivariate Regression

الذي لا يقبل الإرتباطية بين المتغيرات.

علاوة على ذلك، فإن إختبار نمذجة المعادلة الهيكلية سيمكن ضمناً من استخدام التحليل العاملي التوكيدي Confirmatory Factor Analysis ، والذي سيمكن بدوره من فحص وتأكيد النموذج الإفتراضي الذي وضعه الطالب لتأكيد أو نفي العلاقات السببية بين المتغيرات المستقلة والتابعة كما تبين الفرضيات العلمية بالدراسة، وذلك بعد إكتشاف العوامل التي يمكن أن تصنف إليها المتغيرات كما وضعها الطالب مسبقاً في نموذج القياسي Measurement Model بإستعمال التحليل العاملي الإستطلاعي أو الإستكشافي Exploratory Factor Analysis .

بعد إجراء التحليل لبيانات الدراسة وإختبار كل فرضياتها نوعياً وكمياً، توصلت الدراسة إلى وجود تأثير إيجابي ذو دلالة إحصائية بين التبادل البيئي الإكتروني ومعايير الحكامة الجيدة، كما أن هناك أيضاً تأثير إيجابي قوي ذو دلالة إحصائية بين معايير الحكامة الجيدة تحت تأثير التبادل البيئي الإلكتروني بين الإدارات العمومية.

إعتمد الطالب أيضاً على إختبار مصفوفة الأهمية والأداء Importance Performance Analysis كدراسة إحصائية عالية القدرة لإضافة رؤية جديدة للمسؤولين على الأنظمة المندجة في التدبير والتسيير الإداري بشكل عام أو التدبير المندج للنفقات بشكل خاص ، من خلال خريطة واضحة للتطوير الإستراتيجي التي يستخرجها الإختبار بناء على تحليل ردود المستخدمين حسب إستبيان الدراسة المبني على مقياس ليكرت الخماسي . لقد وفر تحليل المصفوفة IPMA معلومات مهمة حول الأهمية السببية لكل المتغيرات المستقلة وقدرتها على شرح أوخلق المتغيرات التابعة، في شكل نموذج هيكلية مقسم الى أربع خانات على بعدي (الأهمية والأداء)، بناء على تحليل أوزان نمذجة المعادلة الهيكلية بين هذه المتغيرات ، التي يحتفظ بها برنامج Smart PLS . وبالتالي يمكن تحديد المتغيرات المهمة والضعيفة High Important/Low Performing ، على الخريطة كأولويات يمكن وضع الأصبع عليها من أجل تحسين فاعليتها في المستقبل، نظراً لأهميتها القصوى.

توصلت الدراسة الى أن أغلب المتغيرات تقع ضمن مربع (أهمية عالية وأداء عالي)، وأن ليس هنالك أي متغير يقع في خانة (أهمية عالية وأداء منخفض) ، مما يؤكد على نجاح التدبير المندج للنفقات GID بالمغرب وقدرته على الرفع من معايير الحكامة الجيدة بين الادارات العمومية. وهذا إن دل فإنه يدل على غياب المعايير التي يمكن تحسينها مستقبلاً من طرف الإداريين وصناع القرار، بل ينبغي الحفاظ وتعزيز كل الإستراتيجيات من حيث الموارد والجهود التي بإمكانها تعزيز الحكامة الجيدة. وعلى ضوء النتائج التي توصلت إليها هذه الدراسة، قدم الباحث مجموعة من التوصيات، يمكن إختزالها في أن التدبير الإكتروني المندج بين الإدارات العمومية ، له وقع وتأثير إيجابيين على معايير الحكامة الجيدة ، وبذلك يكون التبادل البيئي و التدبير المندج دافعاً أساسياً لإلغاء التوجه الإفرادي للمؤسسات العمومية في تدبير خدماتها حتى يتسنى لها تقديم خدمة



أفضل بالشبابيك الأمامية وبالتالي تحقيق التنمية الإقتصادية و الإجتماعية في كل المجالات.  
**الكلمات المفتاحية:** الإدارة الإلكترونية - الحكامة الجيدة - التبادل البيئي - الإندماجية - التوجه  
الإنفرادي - التدبير المندمج للنفقات.

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## List of Abbreviations

eGovWGA	eGovernment Whole-of-Government Approach
eGov	eGovernment
ICT	Information and Communication Technology
WGA	Whole-of-Government Approach
G <sub>2</sub> C	Government to Citizen
G <sub>2</sub> G	Government to Government
G <sub>2</sub> B	Government to Business
G <sub>2</sub> E	Government to Employee
GID	Gestion Intégrée de la Dépense (Integrated System of Expenditure Management)
UNDP	United Nations Development Programme
OECD	Organization for Economic Cooperation and Development
DPLs	Development Policy Loans
PARAP	Public Administration Reform Development Policy Loan Programs
IPMA	Importance-Performance Matrix Analysis
PLS-SEM	Partial Least Squares Structural Equation Modeling
CFA	Confirmatory Factor Analysis
KMO	Kaiser-Meyer-Olkin Measure
AVE	Average Value Extracted

CR	Composite Reliability
A	Accountability
AS	Administrative Simplification
CE	Cost Effectiveness
DIS	Data & information Security
D	Decentralization
EE	Efficiency & Effectiveness
P	Participation
R	Responsiveness
RL	Rule of Law
SC	Seamless Coordination
SG	Strategic Vision
T	Transparency
GG	Good Governance
eGIF	eGovernment Interoperability Framework
IF	Interoperability Framework

## General Introduction

**T**he first chapter of the dissertation provides a general overview to the eGovernment technology and demonstrates the transformation of Public Administration from a paper-based to an ICT-based Administration. The chapter defines eGovernment and describes the statement of problem, objectives of the research, scope of the study and its benefits.

### 1.1 Background

The new era of the information technology witnessed a big transformation from a paper-based administration to an ICT-based connected administration deemed to improve efforts of cooperation between governmental agencies, allowing for an enhanced, active and effective consultation and engagement within the public sector and greater involvement with local and regional multi-stakeholders (UNDP, 2007). ICT is considered as an efficient tool to increase operational management of public service delivery by connecting and integrating all public administrative branches for more cooperation and performance. Traditional public administration <sup>1</sup> is no longer able to preserve ethics of Good Governance, such as efficiency and effectiveness, transparency and accountability, cost-effectiveness, within decentralized and dispersed bureaus (United Nations, 2012). eGovernment is defined as the use of information and communication technologies (ICTs) to provide public services with managerial effectiveness and other values of Good

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<sup>1</sup>Silo-based administration, working in disconnected entities.



Governance in governments (Bhatnagar, 2004). eGovernment is supposed to ensure the accountability of the government to manage the administrative performances and free flow of information between offices (United Nations, 2008b). eGovernment can enhance democratic decentralization, as well, between local and national governments for a tremendous speed response and seamless interchange of information in a transparent manner for responsiveness, efficiency and effectiveness in service delivery. Decentralized governance can reduce transaction costs and ensure greater accountability and transparency in the delivery of the services at the grassroots level (Sangita, 2002a). eGovernment integrates all parts of government branches in a way that enables more control and synergy to perform all administrative operations with Good Governance. According to Gottschalk & Solli-Saether (2009), integrated and collaborative work efforts among widely dispersed individuals or organizations, sharing the same information and workflow has the potential to increase their organizational efficiency and effectiveness, added to the reduction of transaction costs and burdens. In this regard, eGovernment is believed to increase transparency and accountability among governments, strengthening the engagement and participation of local and national governments in the management of integrated operations (Christensen & Lægreid, 2007).

## 1.2 Problem Statement

The area of this research is limited to the G<sub>2</sub>G form of eGovernment because the majority of studies carried in this field were projected on G<sub>2</sub>C practices, more than G<sub>2</sub>G interactions. Therefore, this research study will look into G<sub>2</sub>G eGovernment integrity practices for Good Governance and management with the goals of addressing the apparent gap that exists in literature by extending the understanding of G<sub>2</sub>G eGovernment interchangeability in Morocco. Most of the studies drawn on front office activities and Government-Citizen (G<sub>2</sub>C) linkages, where the focus of international stakeholders is directed now towards the development of eGovernment back office linkages to integrate and join up the back offices for more synergy, collaboration and effective governance.

Public Administration in Morocco has begun to use eGovernment integrated systems between offices to break down the fragmentation of the silo-based approaches. The Moroccan Public Sector reforms called for a Whole-of-Government Approach to join up government agencies working together through the use of eGovernment<sup>2</sup> to federate their back offices for a unified front office service delivery. This study aims to provide an in-depth study of G<sub>2</sub>G practices with the goals of embarking upon the existing gap in the literature. It looks to explore the eGovernment Whole-of-Government effect on Good Governance between public offices.

### 1.3 Research Objectives

The following study aims to explore the eGovernment Whole-of-Government to enhance Good Governance between public sector organizations through the Integrated System of Expenditure Management (GID). In this study, eGovernment refers to the Integrated Management System of Expenditure (GID); whereas, Good Governance is a new paradigm in Public Administration, which emphasizes good principles either between public organizations G<sub>2</sub>G, businesses G<sub>2</sub>B or citizens G<sub>2</sub>C.

### 1.4 Scope of the Study

Morocco has lately implemented an Integrated System for Expenditure Management, the system GID. The system orchestrates different public offices for fiscal management, working in a Whole-of-Government Approach for the promotion of Good Governance in a sensitive sector of expenditure management. The research study analyzes the integration of these new technologies and its roles for the promotion of Good Governance among public organizations to reform management and modernize administration.

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<sup>2</sup>Like passport delivery, RAMED, GID, BADR, GIR, GISRH etc.

## 1.5 Benefits of the Study

Measuring the Integrated System of Expenditure Management, known as the system GID in Morocco, is beneficial to assess the roles of eGovernment Whole-of-Government initiative to fight bad governance and corruption in the Moroccan Public Sector, especially in a sensitive sphere where corrupt public agents prefer ambiguity and resist to transparency, accountability and integrity. The results of the study will assess the roles of the eGovernment Whole-of-Government Approach to enhance seamless coordination and Good Governance between different departments. In this case, the research outcomes will provide managers and theorists useful guidance to design new strategies and orientations to ban silo-based approaches, integrating workflows between different offices, especially after the initiative of *eMorocco 2013*.

**T**his chapter provides a general overview of the Public Sector in Morocco; its definition and its importance in the social, economic and political public life. The following chapter traces the transformation of the public sector through different periods in history from a traditional form of public organizations to eGovernment organizations. Moreover, this chapter sheds light on the Moroccan endeavours to reform public sector governance from bad to good governance.

## 2.1 The Public Sector: An Overview

### 2.1.1 Defining the Public Sector

Scott (2010) in his book *The Public Sector in Hong Kong* defines the public sector as “those government agencies and related organizations that are funded by revenues raised from taxes, fees from the sale of state-owned assets” (p.1). Scott (2010) lists that all these “agencies, departments, the judiciary, funded statutory bodies, publicly-owned corporations and fully or partly-subsidized organizations such as social welfare agencies, schools and universities” form what is called the public sector, excluding the private companies or voluntary associations (Scott, 2010, p. 1). Dube & Danescu (2011) in their *Supplemental Guidance: Public Sector Definition* see that the public sector is an interwoven of all governments, agencies, enterprises and other units that can deliver public programs, goods or services that may exist under international multistate entities or partnerships,

national ministries, regional provinces or local municipalities (p.3). Dube & Danescu (2011) conclude that there must be, at least three types of organizations, under the umbrella of these four levels of the public sector. According to Dube and Danescu (2011), local administrations are accountable and report directly to the central authorities of ministries, which are *Core governments*. These agencies are funded by the government, as part of the government, in daily contact with citizens as front office agencies. However, public enterprises include agencies that deliver services to citizens as well, but function autonomously away from the government funds (Dube & Danescu, 2011, p.4). Accordingly, the public sector organogram differs from each country to another depending on their ideology, public activity, economy and political status, if it is not the mixture of these inputs (Willem & Buelens, 2006).

Scott (2010) divided the public sector into centralized and decentralized public fields. For him, *Core governments* exist within “centralized functions such as finance, security and overall policy-making responsibility”; whereas the decentralized government agencies are all the other public sector organizations, at the local front desks, responsible to deliver social works such as education and healthcare for free (Scott, 2010, p. 2). Therefore, the central governments usually serve as units for policy-making, at the central level, not for service delivery (Rondinelli, 2007). The public sector is viewed as a multilayered system with non-profit diverse organizations destined to serve citizens, under the rule of law (Forsythe, 1997; Fox, 2010).

### 2.1.2 The History of the Moroccan Public Sector

To understand more the transition of the Moroccan governance and public administration reforms, we need to go deeper in public sector historical evolution, before signing series of aid and loan conventions with the World Bank and the International Monetary Fund (IMF) to strengthen governance. According to the Moroccan Ministry of Public Service and Administrative Modernization, the first sign of an administrative office creation is traced back to 1913, in the form of a service of the staff with the General Secretariat of the Protectorate. It was considered as the first body responsible for the

management of the state staff, at that time (Historique, 2016, para. 2). The Moroccan Ministry of Public Service and Administrative Modernization, displays on its website, the major steps that marked the creation of the Moroccan Public sector, beginning from 1913. According to the ministry in charge, the creation of the first public service bureau was created in 1953 and attached to the General Secretariat of the Protectorate in replacement of the office responsible for the regulations, governing the staff, by the decree of the General Resident on 24 May 1953 (2016, para. 2). The Public Service Division of the government, when created in 1959, contained only the division of the Public Service, School of Moroccan Administration and Technical Assistance of Administration created by the Dahir<sup>1</sup> Number: 1.58.201 of 14 January 1959. A year later, the king Mohammed V appointed the first Minister of the Public Service and Administrative Reform by his Dahir Number: 1.60.145 of 27 May 1960.

During the epoch of the king Hassan II, the Moroccan Public Sector witnessed the appointment of the Delegate Minister to the Prime Minister in charge of administrative affairs in 1985 and the reform of the Department of Administrative Affairs by the king's Decree N°. 2.94.249 of 24 May 1994; followed by appointment of the Minister who directed two different ministries: the Ministry of Maritime Fishing and the Administrative Affairs and Relations with the Parliament by his Dahir N°. 1.97.183 of 13 August 1997. The two ministries were split of each other in 1988, during the appointment of a new Minister, who was charged only of Public Service and Administrative Reform in 1998 (2016, para. 2). Thirty-eight years under the sovereignty of King Hassan II marked “a number of economic, social and political reforms to modernize the country” (Zemrani and Lynch, 2013, p.4), especially that the period was marked by “a political unrest” (p.4). Though, Zemrani (2014) in her article: *Teaching Public Administration: The Case of Morocco* estimates the four revisions of the Moroccan constitution over the three decades 1966–1996. Zemrani (2014) sees that the mentioned revisions could empower more the participation of opposition parties in government that had been banned before. The last version of the constitution of 1992 strengthened the position of women in the public sector, which “offered the brightest

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<sup>1</sup>A Dahir is an Arabic word which means the Moroccan King's decree.

beacon of light for the hope of democracy in Morocco” (p.3). When King Mohammed VI succeeded the throne in July 1999, he instantly made several gestures and endeavours to reform the Moroccan public sector, starting with the nomination of the minister responsible for the Modernization of the Public Sector by his Dahir N°. 1.02.312 of 07 November in 2002 (Historique, 2016, para. 2). After four years, the king called to reform this ministry, by delimiting the functions of the minister, added to set out new functions for the Divisions and the Central Services of the Ministry in 2006 and 2011 (para. 2). In 2012, Mohammed VI appointed the Minister Delegate to the President of the government in charge of the Public Service and Administrative Modernization by the Dahir N°. 1.12.01 of 03 January 2012. Maghraoui (2001) in his article *Political Authority in Crisis: Mohammed VI's Morocco* names the young king as “the king of reform” for his thorough demanding to reform “bad governance”. King Mohammed VI, from the beginning of his throne, works tenaciously to speak against, poverty, women downgrading from public life, institutionalized injustice as well as the endemic corruption over the public sector (P.14). Zemrani and Lynch (2013) in *Morocco's Dance with Democracy: An Evolutionary Approach to Democratic Reform* see that Morocco underwent “an evolutionary” rather than “a revolutionary” change towards democratic governance since its independence in 1957. However, the expansion of the Arab Spring in 2011 gave it a distinguished “jolt” towards implementing the values of democratic governance. Accordingly, these evolutionary changes in the public sector and governance reforms were articulated by the new 2011 constitution (articles 145-147), added to the fields of justice, liberty, freedom and dignity. Therefore, the evolutionary way of implementing democratic change in Morocco was implemented in a peaceful transition towards democratic governance (Zemrani and Lynch, 2013).

### 2.1.3 Governance and Public Sector Reforms in Morocco

Public sector governance has been defined as a regime of laws, rules, judicial decisions and administrative practices that oblige, recommend and permit the delivery of public goods and services. Consequently, it is the set of rules, strategies and procedures, exercised

by government agencies to provide good public service delivery, using public resources with responsibility and accountability (Shah, 2007). The term *governance* has gained usage in the public sector more than other sectors (UNDP, 2006). The term *governance* is associated with the public administration in the way that it organizes and guides administrators to behave in good administrative practices, towards what is called the “Hollow State” (Milward & Provan, 2003) or what Justice & Skelcher (2009) called “third-party government”. According to UNDP (2006), “governance refers to the lateral and inter-institutional relations in administration in the context of the decline of sovereignty, the decreasing importance of jurisdictional borders and a general institutional fragmentation” (p.2).

Most of the literature relates public governance with public management, discussing all the set of behaviours and contributions to the governmental performance of public actors when performing their managerial roles towards citizens and administrations (Barthwal, 2003; Kettani & Moulin, 2014; United Nations, 2014; World Bank, 1992a). A good public sector should preserve the ethics of Good Governance. Hence, Good Governance has a direct effect on the public sector and its institutional performance; where inefficiency, corruption, fraud, favouritism, fragmentation and ambiguity can destroy the public sectors, as well as the public trust in them (United Nations, 2014). Good Governance in the public sector is believed to have a direct effect on poverty reduction and human development. The book *Reforming Public Institutions and Strengthening Governance* edited by the World Bank (2000) is a good reference to the importance of Good Governance in the public sector. The World Bank (2000), as an international stakeholder, shows endeavors made in the field, to improve the broader governance environment within which all universal public sectors operate, supporting institutions for public efficiency, accountability, transparency, cost-effectiveness, streamlined operational procedures and integrity (UNDP, 2006; World Bank, 2000). Poor or bad governance result in receiving poor quality services, because of corruption, inefficiency and red tape (United Nations, 2014); therefore, difficulty in terms of access to public services, especially by the poor or other disadvantaged members of the society (Shah & World Bank, 2005). The evolving demands

of citizens and the increasingly complex issues of world security, poverty, unemployment, educational deficits and environmental and economic degradation necessitate a good sympathy and governance among the public sector organizations (World Bank, 2000). Indeed, the public sector is under pressure to perform better and make "quantum leaps" of "breakthrough improvements", like what the private sector did to solve complex issues, related to governance and management (Griffin, Trevorrow, & Halpin, 2007, p. 74; Grindle, 2009, p. 12).

In this way, an inefficient and corrupted public sector can affect businesses, investments and public life of citizens as well as public resources; yet, reforming the public sector can improve all the sectors (Ben Osmane, 2004). Consequently, the Moroccan public sector is under increasing pressure to be reformed, after being delayed by modest ratings on global governance indicators (Zemrani, 2014).

The Moroccan government showed readiness to reform its public sector by strengthening issues of corruption, accountability, transparency, equity, decentralization and access to public service delivery, adopting a wide regionalization as a choice. Indeed, Article 154 of the new Constitution (2011) stipulates equality in access to all public services and Article 155 stresses the rule of law in public service delivery, where Article 157 sticks to the use of "Good Governance" values in public service delivery (William, 2011, pp. 36–37).

Morocco resorted to the World Bank Development Loans to proceed different reforms in governance and public administration, especially when the Bank has changed its lending modalities into Development Policy Loans (DPLs), looking to support reforms introduced by governments rather than being introduced to it (Harrigan & El-Said, 2010). Certainly, Morocco integrated in a series of Public Administration Reform Development Policy Loan Programs (PARAP) with the World Bank to reform its public administration, by the letter number 2541 of Mr Fathallah OUALALOU<sup>2</sup> to the president of the World Bank on 30 April 2004 (World Bank, 2004). The Moroccan minister cited that these administrative reforms are an urgent priority in the Prime Minister's policy to create a favourable atmosphere of development, investment and economy by easing administrative constraints and

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<sup>2</sup>A politician and Moroccan ex-minister of Finance and Economy between 1998 and 2007.

simplifying procedures (World Bank, 2004), merely because “simple and transparent administrative procedures and effective communications can help achieve Good Governance” (Sangita, 2002, p. 335). Mr OUALALOU in his letter stressed the necessity to change the Moroccan administration from isolated silos<sup>3</sup> to an integrated plethora for mutual development between all the public agencies, with the new concept of authority and bureaucracy. The memo of the minister to the World Bank (2004) added that the country has adopted a “Good Management Pact” as a frame of reference to enhance values of Good Governance by “strengthening communication and making government more open to its environment, while ensuring application of the *Royal Guidelines* for implementing and strengthening decentralization and regionalization” (World Bank, 2004, p.35). The World Bank, in turn, reacted to the Moroccan application and developed a series of loans for development (LPD) to improve the Moroccan governance through a long-term strategic agenda, divided into four loan sessions (World Bank, 2005). The First Public Administration Development Policy Loan was approved by the Bank Board on July 1, 2004, to build on governance and public administration reforms. It focused mainly on expenditure decentralization to regional administrations, basing its management on transparency and accountability, through eGovernment technologies (World Bank, 2005). The Second Public Administration Development Policy Loan was approved in 2006 to complete the first reforms, initiated in 2005. The loan looked mainly to improve efficiency in public expenditure management and its public service delivery in Morocco (World Bank, 2006). The Third Public Administration Reform Development Policy Loan of the World Bank to Morocco in 2008 targeted to reform and promote efficiency in expenditure management through an integrated system for greater transparency and accountability, streamlining expenditure management between all the Moroccan public offices (World Bank, 2008). Two years later, the Bank approved the Fourth Public Administration Reform Development Policy Loan Program (PARAP) for Morocco to reform governance, using eGovernment technologies. For the World Bank (2010), eGovernment has the potential to

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<sup>3</sup> *Silos* refer to storage containers for grain and missiles. The word is borrowed as a metaphor to label business and governments functioning in dispersed entities of stockpile information. In corporate governance, silos refer to organizations that are made up of divisions that operate independently and avoid sharing information between them or with employees.

cut administrative “red tape” by simplifying procedures and improving the efficiency, effectiveness, transparency, accountability and decentralization of public service delivery in the country. In a similar vein, Chauffour (2018) remarks that the program of the World Bank is expected to bring deep reforms and yield a positive impact on citizens’ voice, efficiency and effectiveness of the public sector. Indeed, after these series of loan reforms, Morocco has embarked on a major fiscal consolidation effort for Human Resources Management and Expenditure Management. The country launched two Integrated System Applications, one for expenditure management, known as the GID<sup>4</sup>, and the other for human resources management, known as GISRH<sup>5</sup>. Though the reforms were described as “fiscally expensive” and cost millions of dollars, but they have been relatively successful in the MENA countries, including Morocco (Harrigan & El-Said, 2010, p. 20).

#### 2.1.4 Importance of the Public Sector

The public sector, in every country, is connected directly to economic growth (Sangita, 2002, p. 337). Economic development grows correspondingly with governance changes associated with the public sector. However, in non-democratic countries, the ratio of governance and economic development remains low because of the low level of the public sector function (El Malki, 1986, p. 1). The quality of governance and public administration are two consistent issues that were addressed together by different researchers. In reality, most of the reviewed literature draws an implicit link between the governance reforms and the administrative reforms, as interrelated issues towards a more democratic government through more effective public administration and Good Governance (Sangita, 2002a; Zemrani, 2014). According to Habib El Malki (1986), the public sector is “part and parcel of the State” (p.120); therefore, there is no way to isolate the study of that sector from the socio-political background of the state itself. The literature that tackled public sector evolution in Morocco so far talked about the evolution of the public life, as well (Boix, 2001;

<sup>4</sup>A French word abbreviation of the system *Gestion Intégrée de la Dépense*, which the Integrated System of Expenditure Management. The word GID is a famous word among officers working on public expenditure in Morocco.

<sup>5</sup>A French word abbreviation of (Système Intégré de Gestion des Ressources Humaines), which is the Integrated System for Human Resources Management in English.

El Malki, 1986; Maghraoui, 2001; Zemrani, 2014; Zemrani & Lynch, 2012). But still, the public sector evolution in the world has spawned fertile literature on it (Boix, 2001, p.1), aside from Morocco, where few articles have been written about it, so far. Indeed, El Malki (1986) has mentioned the scarcity of public sector studies at the Moroccan universities, when he said:

At the university level, the absence of serious empirical studies has encouraged a penchant for theoretical generalizations to the detriment of specific research as far as the public sector is concerned. Without the assimilation of adequate quantified data on this sector, claims to a thorough knowledge of the national economy are hardly credible. (p.110)

The public sector has interfered in managing all the public wealth and national resources and economy of any nation (Fox, 2010, p. 3). It has widened its size to accommodate all important activities of public life, though the pressures exercised on the public sector to reduce its size and adapt it to the changing requirements of citizens, with the continuity of governance values (Huberts, Maesschalck, & Jurkiewicz, 2008). To sum up, the public sector is a wide sector that holds a country together. It bridges between political representation of citizens and the state, but commonly towards Good Governance.

### **2.1.5 Importance of Coordination in the Public Sector**

Cross-sectoral coordination becomes now a new noticeable issue for efficiency and effectiveness in the public sector, since “seamless services are likely to be more effective than delivering separate services to the same customer group” (OECD, 2003, p. 75). Cross-agency coordination seems to have acquired new importance in other countries to emphasize horizontal coordination, communication and “Whole-of-Government Approaches” to reform the public sector through an integrated governance of public sector agencies (Halligan, 2007). This horizontal networked model of service delivery has been called upon in different countries (Halligan, 2007), since traditional hierarchical bureaucracies have failed to interconnect and deliver services that successfully deal with big issues of public security, budget, environment and ecosystems... etc. Bryson, Crosby, & Stone (2006) define cross-sector collaboration as “the linking or sharing of information,

resources, activities, and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately” (p.44). Accordingly, cross-agency collaboration takes different names in different countries but serves for one purpose. In Morocco, the Whole-of-Government Approach is referred to as “Interoperability and Integrity” (Maroc Numeric, 2011), where it is “Whole-of-Government Approach” in Australia. The United Kingdom calls it the “Joint-up Government”; in Canada, it is known as “Horizontal Government”. The United-States calls it “Network Government”; however, in New Zealand, it is an “Integrated Government” (Halligan, 2007, p. 204). Willem & Buelens (2006) underline that coordination and knowledge sharing has blipped some bureaucracies and caused red tape by “lengthy procedures and documents” (p.583); where the United Nations (2012) emphasizes the necessity of collaboration and cross-agency coordination through “the whole spectrum of governance” to improve streamlined service delivery using ICTs (p.70). The “Whole-of-Government Approach” through eGovernment has the power to convert public organizations from traditional “single-purpose” front office towards more decentralized, streamlined, transparent, accountable and less corrupted offices that avoid duplication as well (Halligan, 2007; OECD, 2003, 2005a; United Nations, 2012). According to OECD (2003), eGovernment integration and interoperability can improve communication between different hierarchies to upsurge networked and streamlined transactions for “one-stop” front office service delivery. Therefore, integrated service delivery through eGovernment can empower Good Governance and long-term development objectives. As a consequence, many governments are moving from a centralized single-purpose organization model to a decentralized unified whole-of-government model for more efficiency and effectiveness in management (United Nations, 2012, p. 69). The OECD member countries believe that the networking of government organizations with a common set of electronic resources and data can improve responsiveness and the Whole-of-Government Approach is necessary to keep this “chain-oriented” service delivery between different public organizations for Good Governance (OECD, 2005, p.134).

The OECD’s book (2005), titled *Modernising Government: The Way forward* is a good

reference to synthesize OECD member countries efforts in modernizing their public sectors over the last 20 years. The book introduces a better understanding of how previous reform efforts have given actual fruits. The book scrutinizes the contribution of six axes in governance ethics, which are considered as key ethics to promote the public sector governance in the OECD countries. Open government, performance, accountability and control, restructuring organizations, the use of market-type mechanisms and public employment/civil service are defined in the book as “drivers of change in OECD governments” (OECD, 2005). What is remarkably new in this study is the way it looks at these different levers from a “Whole-of-Government” perspective. In this vein, the study views governments as joined-up systems to deduce a new governance procedure to respond to the new needs of society, which are cost-effectiveness and time-effectiveness. Therefore, OECD proposes the whole-of-governance management to reform governance and carry on a “one-off reform”, meanwhile. However, this study remains limited in its scope of examination, as it selected only for a few values of Good Governance. Furthermore, the study concerns only OECD countries and combined public sector reforms to those in the private sector; where there must be a separation between public and private sectorial reforms. eGovernment as a lever of the Whole-of-Government Approach has not been emphasized in the study, which limits the contribution of the study.

### **2.1.6 Coordination Theory in the Public Sector**

Governance and coordination have been described as essential “protocols” in reforming the public sector. Coordination is suggested to foster communication and transparency to constitute what is called “a reasonable market practice”, among bureaucracies working towards the same objective (Thornton & Fleming, 2011, p. 129). Governance is a way of workflow coordination between organizations (Tierney, 2006). It is “the act of working together harmoniously” (Malone & Crowston, 1990, p. 5), to manage orchestrated activities together (Malone & Crowston, 1994). Therefore, coordination theory builds “tools that enable people to work together more effectively and more enjoyably”. The theory is called for Crowston as a developing form of theories about how coordination

can happen in various kinds of systems and the way “we can help us build useful cooperative work tools” (Malone & Crowston, 1990, p. 11). The theory has impacted different disciplines that necessitate coordination and collaboration, especially in public administration. Coordination Theory has been cited, at least, in 287 journal articles, conference papers and dissertations (Crowston, Rubleske, & Howison, 2006), investigating how separate actors and activities can be coordinated in a Whole-of-Government Approach through ICTs (Malone & Crowston, 1990). Coordination always happens beyond curtains and its visibility is detected by the absence of efficiency. Indeed, Good Governance in front offices must be contingent on a streamlined coordination between offices. Olson, Malone & Smith, (2012) in their co-edited book: *Coordination Theory and Collaboration Technology* try to determine “the principles underlying how people collaborate and coordinate work efficiently and productively in environments characterized by a high degree of decentralized computation and decision-making” (Olson et al., 2012, p. 2).

According to Olson et al. (2012), coordination theory can help to study the impact of ICTs on the way people coordinate their work together in corporations, under what they named “computer-supported cooperative work”. More specifically, ICT-based coordination, offered by these “computer-supported cooperative works”, are new capabilities in organizations to communicate “information faster, less expensively, and more selectively” (Olson et al., 2012, pp. 8-9). For Olson et al (2012), coordination can change organizations from mere “ad hoc organizations” into solid organizations of highly decentralized networks and team works. Coordination theorists are concerned with coordination theory’s impact on governance and decision-making among a group of people and how do computer-based group processes and tools affect the making of decisions, especially by the “rapid response and high reliability” offered by the new technologies (p.22). Malone and Crowston (1994) aim to theorize coordination among a “groupware”, to help people coordinate their activities better by facilitating transactions between corporations, integrating ICTs to convert individual actions into larger purposeful wholes, respecting onuses of time, order, quantity and quality.

## 2.2 eGovernment Technology in the Public Sector

### 2.2.1 Defining eGovernment

Electronic government (eGovernment) is a new field in public and private administration, which accompanied the emergence of ICTs and Internet (Heeks, 2005). eGovernment is defined as the use of ICTs to improve Good Governance ethics between G<sub>2</sub>C, G<sub>2</sub>B and G<sub>2</sub>G (OECD, 2005). Most of the literature refers to eGovernment as a process of modernization and reform of service delivery and its transformation from a mere office-oriented to a citizen-oriented service, in which governments “work, share information and deliver services to external and internal clients” (Kettani & Moulin, 2014, p. 45). For Heeks (2005), eGovernment includes all the automation of offices, systems and web sites of service delivery (Heeks, 2005, p. 4). OECD (2003) in *The eGovernment Imperative* listed three main definitions of eGovernment, which can be summarized in the use of ICTs in front and back offices, to promote Good Governance (OECD, 2003, p.63). The edited book *Developments in eGovernment: A Critical Analysis* is a good reference to the concept of eGovernment and its theoretical contributions, empirical investigations and developments across the European Union. The whole book is limited to the area of eGovernment service delivery by various levels of government. Therefore, it is an in-depth critique for students, policymakers and researchers, for it pursues the development of eGovernment changes on local, national and global levels. The book defines the eGovernment concept in a “narrow definition” as a “service delivery on the internet” and in a “broad definition” as “the use of ICT in the public sector”. The authors added that the limit in eGovernment “broad definition” is due to lack of necessary information for a “broader conception of eGovernment” and that the sluggish improvements in eGovernment are due to the lack of back office “benchmarking studies” (Griffin et al., 2007, p. 76). Most measurement studies focused on front office reforms more than back office integrity reforms (Griffin et al., 2007, p. 81), the reason which pushes me to explore the roles of eGovernment technology in back office operations, in this research.

### 2.2.2 Forms of eGovernment

eGovernment exists as a multidirectional form of transaction. It is a long-term strategic plan to reform the process of all existing transactions of governments towards citizens, businesses and governments. Front office deliveries are concerned with the online information and service delivery to citizens (G<sub>2</sub>C) and businesses (G<sub>2</sub>B), through ICTs. However, the back office side of eGovernment is concerned with the internal administrative transactions and information sharing both within and between governments. Therefore, (G<sub>2</sub>C) or (G<sub>2</sub>B) transactions exist within the rubric of the front office; where (G<sub>2</sub>G) transactions are carried within back offices (United Nations, 2014). An example of (G<sub>2</sub>B) involves business-based transactions like payments, taxes and placed bids for contracts between the government and business corporations. Government-to-Consumer/Citizen (G<sub>2</sub>C) involves the use of ICTs, designed to simplify people's interaction with their governments as customers. eGovernment supports the new administrative approach to put citizens at the heart of service delivery, moving them from inline to online service delivery. Citizens now could request their administrative licenses and documents or participate in decision-making and elections using technology from their homes. Government-to-Government (G<sub>2</sub>G) involves all the processes of electronic integration and interoperability to streamline transactions between offices with more transparency and accountability mechanisms. It is a new approach in public administration that supports Whole-of-Government coordination between multi-stakeholders to enhance ICT-enabled public sector governance (United Nations, 2008b).

### 2.2.3 eGovernment Evolution Stages

Many authors try to provide a better understanding of the emerging patterns of eGovernment performance across the development of ICTs. The United Nations Surveys contribute to the ongoing discussion drawing a good map for eGovernment maturity stages. The model underlines the ongoing endeavours of all governments around the world to reach the best for the welfare of its customers. All the models developed so far picture a

true, stepwise and real development of eGovernment (Coursey & Norris, 2008). In the same context, Fath-Allah, Cheikhi, Al-Qutaish, & Idri (2014) compare 25 maturity models of eGovernment developing stages, for the purpose to reveal similarities and differences between them. The paper begins with the model of Layne and Lee (2001) and ends with the UK national Model. Fath-Allah et al. (2014) conclude that all the models, under study, express the same features using different terms. For them, “eGovernment maturity” has undergone a unique evolution through time according to the pace of each country’s “e-readiness”. Most of these authors confirm the possibility to reduce their models into a four major stage model evolution which comprises: “Presence, Interaction, Transaction and Integration” (Layne and Lee, 2001), which is similar to the model developed by the United Nations in its surveys (United Nations, 2008b, 2014). Effectively, the United Nations (2014) has a more holistic and linear map of eGovernment evolution stages. This model begins with an emerging state of the Internet in the mid of 1990s, that has given birth to eGovernment technologies, serving citizens through static websites. Citizens could have only basic and limited information about their administrations online. Then, eGovernment moved a bit to serve citizens with some online downloadable forms, regulations and services. At that stage, eGovernment facilitated a G<sub>2</sub>C two-layered communication process. Later, eGovernment developed into a “transactional” stage, where governments could receive some input from their citizens, in turn. People could pay their taxes and apply for certificates and licenses online. The “connected stage” witnessed the emergence of Web 2.0 enhancing technology and interactive applications that managed to transform governments into connected entities. Data, information, workflows could be seamlessly transmitted between governments, creating an efficient environment of interchange, coordination and communication between agencies (United Nations, 2014). eGovernment, now, is believed to change silo mindsets with holistic cultures. Silos could disappear when governments are orchestrated together in a Whole-of-Government Approach for unified service delivery in front offices (United Nations, 2014).

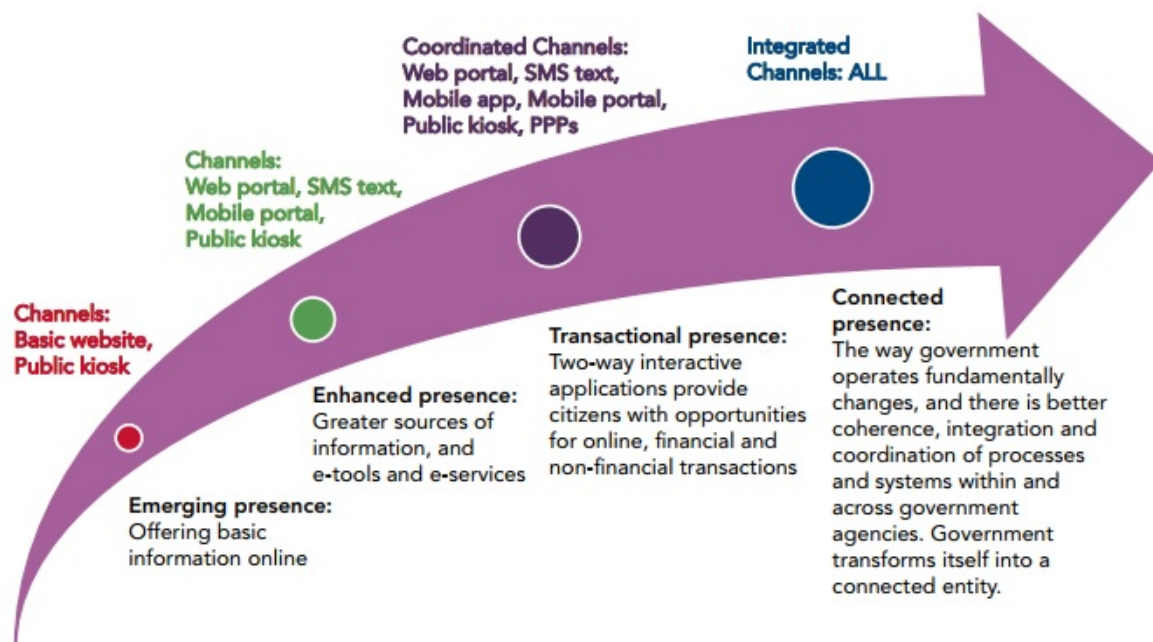


Figure 2.1: UN eGovernment maturity model

Source: (United Nations, 2014)

### 2.2.4 The Whole-of-Government Stage

The United Nations Public Administration Network (UNPAN) developed series of surveys between 2001 and 2014 to help countries, especially developing countries and countries in economic transition, respond to challenges of Good Governance in the Public Sector. The long-term objective of UNPAN is to build an eGovernment WGA that links regional with national institutions, not for public service provision only, but also for efficiency, transparency, accountability and streamlined service delivery that may render cost savings in government transactions (United Nations, 2008b). This new approach is initiated in the world as a reaction to the shortcomings of “single-purpose organizations”. The Approach has been adopted for public sector reforms in United States, United Kingdom, Australia and Canada (Christensen & Lægreid, 2007). Indeed, collaborative governance through a solid eGovernment Whole-of-Government Approach is believed to bring many benefits and prospects to public administration, according to the United Nations (2014), mainly:

- Effectiveness and responsiveness of governments towards complex administrative

issues.

- Simplification of Administrative procedures.
- Reduction of duplications and rule of law unification between public agencies.
- Cost-effectiveness and time-savings.
- Citizen's trust increase in their governments.
- Decentralization of public service delivery through ICTs.
- One-front-end delivery of public services and goods.
- Increased transparency and accountability mechanisms for cross-agency collaboration.
- Integrated and seamless service delivery.
- Innovative approach to complex problem-solving.
- Collaboration and shared strategic visions (United Nations, 2014, pp. 78–82).

United Nations (2008) in its *eGovernment Survey 2008: From eGovernment to Connected Governance* dedicates the second chapter to look at the eGovernment benefits if management is well-coordinated through ICTs. Therefore, connected governance should replace hierarchical silos of governments, which failed to deliver efficient services in front-desks. International Stakeholders always highlight the necessity to understand the new economic, social and administrative new inquiries of Good Governance. Therefore, a holistic approach towards connected governance should substitute the silo-based approach of the public sectors to consolidate back office activities, to find solutions for complex issues, through coordinated synergies (United Nations, 2012, p. 55).

### **2.2.5 eGovernment initiatives in Morocco**

Morocco issued a package of eGovernment strategic plans since 1997, with an online administration program to reform the public sector (Kettani & Moulin, 2014; Maroc

Numeric, 2011). OECD (2005) sees that eGovernment technology is the best choice to reform the public sector in MENA countries, after the failure of traditional strategies. eGovernment could simplify administrative procedures, cut duplication and lower endemic corruption (OECD, 2003, 2005, 2013). Henceforward, Morocco engaged in series of World Bank loans to improve its administrative governance, reinforcing communication, quality, proximity, transparency, accountability, efficiency and performance in the administrative management (Chauffour, 2018).

The online administration program in 1997 is followed by *eMorocco 2013* to reduce administrative transaction costs and position Morocco internationally and externally in the field of ICTs. The country launched later for *Maroc Numeric 2013*<sup>6</sup> with a budget of 2.5 billion Dirhams invested on the program (Bennani & Elayoubi, 2008). An inter-ministerial committee (CIGOV) is nominated to benchmark and assess this project, which looks to increase interoperability among ministries, national and local public agencies through integrated system applications, making ICT as an engine of the offshoring activities, research and development in Morocco (OECD, 2010). Twenty-five eGovernment projects out of sixty-nine projects are operational now, including six transactional online services. *Watiqa*<sup>7</sup> is an example that enables citizens to receive their birth certificates and other administrative documents on their devices only by a registered mail. This automated (G<sub>2</sub>C) application aims to reduce transaction costs and bribery, associated with the direct contact of citizens with local officials (Kettani & Moulin, 2014). Now, many other (G<sub>2</sub>G) Inter-organizational System Applications function between different ministries. BADR<sup>8</sup>, for example, is also an operative system, since 2009, which makes it easier for customs to register their statements online. DAMANCOM<sup>9</sup> system also receives an online declaration of earnings and payments. Direct Info<sup>10</sup> allows citizens to consult companies' legal and financial information, to get a certificate and to register a trademark (OECD, 2010). The National Social Security Fund (NSSF) and the National Agency of Land Conservation,

<sup>6</sup>The program aims to integrate ICTs in administration to transfer the Moroccan public sector from an office-oriented to citizen-oriented, putting customers at the center of service delivery.

<sup>7</sup>[www.watiqa.ma](http://www.watiqa.ma)

<sup>8</sup>A French word abbreviation of the system (Base Automatisée des Douanes en Réseau).

<sup>9</sup>La Caisse Nationale de Sécurité Sociale.

<sup>10</sup>Office Marocain de la Propriété Industrielle et Commerciale in French.

Mapping and Cadastre (ANCFCC) can also serve their customers online. The integrated eGovernment system GID links all public ministries, delegations, provinces, local collectivities to manage public expenditure. The system comes out of a series of fiscal reforms, deemed to modernize expenditure management between different public agencies. It is an operable system since 2010, which is believed to increase efficiency, transparency of budget and accountability between local and national offices. The GID system is a major achievement and a pure successful product of the Ministry of Finance, which is offered to boost holistic management for the public budget in the country.



Figure 2.2: Integrated System of Expenditure Management in Morocco (GID)

Source: [www.tgr.gov.ma](http://www.tgr.gov.ma)



## 2.3 Interoperability and Integration in the Public Sector

### 2.3.1 Defining Interoperability

Interoperability is the ability of government organizations to share, integrate information and services using ICTs and other common standards for a shared front-end delivery (Gottschalk & Solli-Saether, 2009). Interoperability is like a “chain that allows information and computer systems to be joined up both within organizations and then across organizational boundaries with other organizations, administrations, enterprises or citizens” (Herbert, Ralf, & Hans, 2011, p. 23). It is an eGovernment process to integrate multiple channels in a Whole-of-Government Approach, across boundaries, sharing information and integrating service delivery for an advanced stage of eGovernment maturity called: “Connected Government” (Pardo, Nam, & Burke, 2012; United Nations, 2008b, 2014). In this regard, interoperability would be a good asset for eGovernment maturity if back offices are pooled together through integrated systems for synergy and seamless coordination. The rationale behind interoperability is to create eGovernment collaborative synergies, sustained by integrated ICT innovations, to achieve maximum cost savings and efficient service deliveries (United Nations, 2012). Indeed, interoperability appeared as an urgent process between national, regional and global institutions that urges nations to work in wholeness entities to deliver aid solutions against international disasters of terrorism, climate change, food shortages and other complex issues that need an interoperable governance framework (United Nations, 2008). Interoperability is a new fashion, which emerged as a result of the eGovernment maturity stage: "Networked Presence". It is an electronic stage, in which multiple vendors are allowed to work together, in a value chain, managing heterogeneous workflows together on a shared platform. Hence, for systems to be interoperable, technical, semantic and organizational layers, are needed (Gottschalk & Solli-Saether, 2009).

## 2.3.2 Interoperability Categories

### Technical Interoperability

Technical interoperability is linked to the technical issues of computer systems, open data formats and telecommunications (Gottschalk & Solli-Saether, 2009). According to the European Interoperability Framework (2004), technical interoperability is concerned with the way integrated system applications and Internet interconnect services of different businesses (European Communities 2004, p. 16). However, technical interoperability is dependent on a common understanding and use of integrated applications between businesses (Gottschalk & Solli-Saether, 2009, p. 20). Indeed, all the eGovernment Interoperability Frameworks (eGIFs) in the world are built on good technical interoperability to ease and streamline (G<sub>2</sub>C), (G<sub>2</sub>G) or (G<sub>2</sub>B) interchanges. eGIFs are launched to enhance the new approach of joined-up services, putting citizens at the heart of service delivery (Gottschalk & Solli-Saether, 2009; Pardo et al., 2012; United Nations, 2008b). Now, governance has shifted from an intra-organizational into inter-organizational and lately into interoperable management of public issues, due to the technical development of ICTs in the world (Pardo et al., 2012).

### Semantic Interoperability

According to the European Interoperability Framework (2004), Semantic Interoperability looks at the way information and data are understandable among system applications. More precisely, semantic interoperability is the translation of data between different systems, giving it a shared vocabulary to be understandable, between offices. Semantic interoperability is achieved, when information is made understandable among application users, especially in G<sub>2</sub>G processes. At this stage, information and data is consequently recycled and reused among integrated offices. They are semantically analyzed by computers only when it is shared or used for security purposes (Gouvernement du Maroc, 2012). In this way, Integrated Systems develop semantic codes for data analyses among different users and stakeholders, like dates, usernames, computer



numbers, ID ... etc. (Goldkuhl, 2008; Herbert et al., 2011).

### **Organizational interoperability**

Organizational interoperability ; however, is the fruit gained from the consolidation of technical and semantic layers between different systems to define business goals and collaborate back offices, so as to “address the requirements of the user community by making services available, easily identifiable, accessible and user-oriented” (European Communities 2004, p. 17). All the eGovernment Interoperability Frameworks (eGIFs) are prescribed by governments to increase effectiveness and efficiency of eServices, with a secure personal identification, secure and reliable data transactions and processing among users and stakeholders, with cost savings (Herbert et al., 2011, p. 83). Therefore, organizational interoperability is not a choice, but a necessity in itself, prescribed by international organizations for Good Governance to put not only citizens but also institutions at the center of service quality. According to Herbert et al. (2011), eServices will be accessible at fingertips of citizens, “if only agencies work together, coordinate their processes, and make their ICT system interoperable” (p. 143). In conclusion, successful semantic and technical layers would orchestrate back office transactions and workflows for effective front desk deliveries.

### **2.3.3 eGovernment Interoperability Frameworks (eGIFs)**

eGovernment Interoperability Frameworks (eGIFs) has appeared recently to orient eGovernment approaches in the world towards Whole-of-Government Approaches, enabling offices to accommodate a rapid pace of technological change (Lisboa & Soares, 2014). eGIFs manuals dictate a set of semantic and technical regulations to unify the understanding of workflow management between orchestrated entities (Gottschalk & Solli-Saether, 2009; Herbert et al., 2011; Lisboa & Soares, 2014). In this direction, many countries have created and published their eGIFs and urged their public agencies to stick to its use to boost eGovernment Whole-of-Government usage. In this regard, Lisboa & Soares (2014) prepared a comprehensive list of countries that currently have an

eGovernment Interoperability Framework. The study is universal and unique in the way it listed for countries with Interoperability Frameworks (IF). Lisboa & Soares (2014) delivered their worldwide fieldwork questionnaire to 150 countries, including Morocco. The data gathered was translated to find out that 46 countries have a national IF, 10 countries do not have it; where other countries did not complete the questionnaire or answered it. Countries with IF recognized its importance to increase their “digital whole-of-government initiatives to achieve more efficient government”, as they have stated, accordingly (Lisboa & Soares, 2014, p. 6). The chart, used in the study, ranked Morocco among the countries that did not fill the questionnaire (p.9), though it has created its IF and published it in 2012 (Direction de l’Economie Numérique, 2012).

### 2.3.4 The Moroccan Interoperability Framework

Morocco created its Interoperability Framework (IF) on 24/05/2012. The document is titled in French as “Cadre General d’Interopérabilité” (GCI). The document is now open-accessed on the Moroccan eGovernment website: [www.egov.ma](http://www.egov.ma). The website publishes all the eGovernment documents, including the Moroccan Circular 9/2013 signed in the first of June, 2013, by the President of the Government: Mr Abdelilah Benkirane. The circular informs all the Moroccan ministries about the necessity to stick to the Interoperability Framework for join-up undertakings. Moreover, the government created a joint committee *CIGOV*<sup>11</sup> to supervise and evaluate the Moroccan interoperability framework (GCI) and submit a regular report to the president of the government about the advancement and the operation of this new approach. The Circular assigns the annual report to the ministry of Industry, Commerce and New Technologies, which heads the (CIGOV) commission (Le Gouvernement Du Maroc, 2013).

The Moroccan Interoperability Framework is launched in parallel to *eMorocco 2013*, which calls to integrate ICTs in public administration for Good Governance, putting citizens at the

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<sup>11</sup>The Inter-Ministerial Committee for eGovernment. It is a strategic body that sets the course in terms of projects and initiatives to be conducted under the program, assessing the progress and the results of eMorocco 2013. One of its main duties is ensure the allocation of the needed means and resources to achieve a cross-administrative collaboration. CIGOV is chaired by the Minister of Industry, Trade and New Technologies in Morocco. (refer to the circular on appendices)



center of efficient service delivery. Interoperability necessitates the integration of information systems between the central ministries and their decentralized local agencies, crosswise all the kingdom (Direction de l'Economie Numérique, 2012). Therefore, the Moroccan Interoperability Framework (IF) is an agenda that specifies norms, standards in which all public administrations should partake through unified technical, semantic and organizational systems, for a joint-up delivery between G<sub>2</sub>Cs, G<sub>2</sub>Bs and G<sub>2</sub>Gs (Direction de l'Economie Numérique, 2012, p. 10). The Direction of Digital Economy, working under the Ministry of Industry, Commerce and New Technologies, urges for interoperable information systems among public administrations or businesses to raise the quality of services, by using integrated systems and applications that are internationally recognized. Hence, these integrated systems will manage to lower administrative transaction costs and cut red tape (Direction de l'Economie Numérique, 2012, pp. 4 -5). Morocco recognizes, now, the power of the Whole-of-Government Approach in perking up Good Governance ethics in public administration. According to Solli-Sather (2011), good administrative benefits must be yielded behind shared and interoperable work processes. Indeed, Herbert et al. (2011) quote in their prominent book *Organizational Interoperability in eGovernment* that interoperability is a very essential vehicle for Good Governance:

This organizational structure is proven and exists for Good Governance reasons. Following the proximity principle, citizens should have easy access and need limited effort for getting in contact with their administration; and the administration should be familiar with the constituency. In the virtual world government services become available at citizens fingertips but only if agencies work together, coordinate their processes, and make their ICT system interoperable. (p. 143)

Herbert et al. (2011) records that public administration is transforming in the world, now, and ICT is heading to aggregate and orchestrate back offices through unified systems of interoperable transactions. The orchestration which could link the central governments to regional offices through eGovernment.

### 2.3.5 Back office Integration for a Whole-of-Government Approach

#### Integrated System Applications

Many nations have transformed their eGovernment applications from a mere emerging interoperability framework to real connected entities that respond to the needs of its citizens, businesses and governments themselves. Indeed, “interoperability is a critical success factor for achieving a mature level of eGovernment to enable a citizen-centric approach to the provision of services” (Alshetewi, Goodwin, & De Vries, 2013, p. 1). Therefore, we can say that integration is necessary for interoperability to connect back offices through unified system applications, called integrated management systems. According to United Nations (2008b), integration has the potential to create an environment of wholeness, in which data, systems and processes are completely integrated, internally, to give value to services, externally, at the end. Integrating back offices would have an internal positive effect on governance though when duplication, costs and procedures are decreased; and when coordination, transparency, accountability and security are increased (United Nations, 2008b, p. 7). According to the United Nations (2014), back office integration is a real lever for Good Governance among national and regional offices (p. 76).

#### Integrating Back offices in Morocco

Different ministries in Morocco dashed very early to join-up offices through unified systems. Integrated Management System of Expenditure or the Integrated System of Managing the State staff <sup>12</sup> are the widest systems, that orchestrate different public administrations in Morocco (Ben Osmane, 2004). For example, the Moroccan Biometric Passport System is a solid e-application that orchestrates extensively the Moroccan provinces, the Ministry of Interior and the General Directions of the National Security with *Dar As Sekkah*<sup>13</sup> to work in Whole-of-Government Approach to deliver a one-stop service at the end, which is the passport. The integrated system of BADR (Base Automotizé des

<sup>12</sup>Le système de Gestion Intégrée du Personnel de l'Etat (GIPE) in French.

<sup>13</sup>It is the Bank Al Maghrib's printing unit for money paper and passports in Rabat.



Douanes en Réseau) orchestrates all customs offices of the kingdom. Therefore, it coordinates and controls customs activities and declarations of all access points in the country. The GID is also an electronic “tracking system” for expenditures all over the kingdom; it joins up the ministry of finance<sup>14</sup> with other national ministries and their sub-offices, allowing for a unified management of expenditure, all over the country. The integration of this system came as a reaction to reform public expenditure management with Good Governance, all over Morocco (Banque Mondiale, 2007). For this reason, eGovernment Interoperability Frameworks are necessary to unify administrations, managing the same business, bringing them to operate in one room, in spite of the different administrative structures, hierarchies, cultures and goals, that may exist between them.

## 2.4 Governance, Bad Governance and Good Governance

### 2.4.1 Governance

The concept of “governance” is very old in history. The term had been coined in a discourse, presented by Kautilya<sup>15</sup> to his people. Kautilya had emphasized in his treatise ethics of justice, tolerance, wealth and interests safeguard as fundamental pillars that the king would preserve for his subjects, at that time. These good ethics were baptized by king Kautilya, as an “art of governance” (Barthwal, 2003; Kaufmann & Kraay, 2007a). In this direction, governance is a process of interaction between authorities and citizens. It is the way governments influence policies and make decisions for public welfare (Barthwal, 2003). In the Seventeenth Century, governance had been defined by Chaucer and Shakespeare simply as a method of management to be developed later into an act of governing to achieve whatever is good for society (Sangita, 2002a). Towards the end of the twentieth century, the concept of governance got a prominent attention among social scientists, aid donors and civil society, to be turned into a rich field of study in different

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<sup>14</sup>The pilot of the project.

<sup>15</sup>A king in India before 400 B.C. (Renu, 2014).

disciplines, like economics, international relations, human development studies, political sciences, public administration and policies (Uzun, 2010), as a new discipline that concerns the whole public life. Governance is a way of management, if not a discipline that contains all the good values of good public management. Indeed, governance is bigger than government (Sangita, 2002a), where a government is a mere institution in which these values and principles are executed for the welfare of citizens, employees and governments themselves. In this way, governance is directly attached to the outcomes of sustainable human and economic development (Kaufmann & Kraay, 2007a). A good way of governance must reflect a good human and economic development very soon; where poor governance yields the opposite. In this direction, the World Bank is more tilted to define governance as to how power is "exercised in the management of a country's economic and social resources for development" (Kaufmann & Kraay, 2007a, p. 5). The World Bank focuses on the governance roles to lift political and economic development, in the values of state responsiveness and accountability and their impact on political stability, operating under the rule of law (Barthwal, 2003). The reason why most of the Governance Improvement Programs, carried by the World Bank, in the world, do encourage Public Administration reforms as valuable World Bank-assisted investments to improve governance, economic and human development in its client countries. The World Bank impinges directly on economic policy and management of governance and avoids the more quarrelsome aspects of "good government" controversies (Moore, 1993).

According to Thomas G. Weiss (2000), the notion of "governance" has been defined in many ways; for the World Bank, it is "the manner in which power is exercised in the management of a county's economic and social resources for development" (World Bank, 1992a, p. 1). The World Bank looks at governance as a way of management that shapes the use of power within public institutions. In this way, the World Bank limits the concept of governance to the way governments use power to control their public issues. However, the United Nations (2014) sees that governance encompasses economic, political and administrative authority in which the states manage their public affairs. Governance is, also, how "citizens and groups articulate their interests, exercise their legal rights, meet their obligations and



mediate their differences” (Thomas G. Weiss, 2000, p. 797). For the OECD, governance is “the use of political authority and exercise of control in a society in relation to the management of its resources for social and economic development” (Weiss, 2011, p. 170). In this respect, governance is more than public management and citizen engagement, it is also the way governments manage and distribute public resources fairly among citizens for their welfare (Thomas George Weiss, 2011). Governance is beyond the government; it is the process in which governments or governors govern their societies. Therefore, the spirit of governance would be good, if it is impregnated with a democratic ethos, where its absence would end in bad governance. A democratic ethos that is based on anti-corrupted, effective, transparent and accountable institutions, which behave under equity and rule of law (Kaufmann & Kraay, 2007a; Sangita, 2002a).

### 2.4.2 Bad Governance

Good Governance is prescribed as a medicine to sustainable development in nations. However, bad governance is increasingly considered as “one of the root cause of all evil within our societies”, in which the word “bad” has a negative psychological reference that represents something undesirable. Bad or poor governance echoes a general understanding of poor institutional quality, poor bureaucratic efficiency, endemic corruption, when public institutions are unable to preserve rule of law for human rights and development and holding their institutions accountable (Misuraca, 2007). Bad governance in public administration directly connotes corruption, inefficiency, ambiguity, indifference and delay in service delivery (Coker, 2014, p.1126). Indeed, corruption produces discrimination, fraudulence and ambiguity in public administration, when accountability is absented (Odhiambo-Mbai, 2003). As a result, women and poor people are marginalized from services and their public rights. Indeed, corruption and bribery can distort public budgets as well, creating an inequitable separation of public resources among urban and rural people, who lose trust in their authorities (Shah & World Bank, 2005). For this reason, corruption has been a pivotal element in discussions of academia and international stakeholders, “they are now given higher priority in development circles

and by the corporate sector, including multinationals” (Kaufmann, 2005, p. 81). Control of corruption is an essential indicator, according to the World Bank, to measure Good Governance in countries (Kaufmann, 2005; Kaufmann & Kraay, 2007a). For the World Bank, governance and anti-corruption efforts are interrelated to transform bad governance into Good Governance, suggesting eGovernment as a solution for citizens to step over corrupted officials, through the electronic delivery of services instead. Therefore, eGovernment is supposed to cut endemic corruption and bad governance by moving public services from the “inline” to “online” deliveries (United Nations, 2014).

### 2.4.3 Good Governance

Theorists and researchers have discovered that “Good Governance” is an old treasure such an old wine that is presented in new bottles (Chigbu, 2010). Effectively, many authors claim that the concept of “Good Governance” is as old as ethics of goodness, badness, weakness, effectiveness, efficiency and rules are old in the world as well (Ali, 2006; Kautilya, 2000; Renu, 2014). The use of Good Governance is traced back into Kautilya’s *Arthashastra*<sup>16</sup> (Ali, 2006; Kautilya, 2000), which is revived by Rudrapatna Shamasastri<sup>17</sup>. Kautilya’s *Arthashastra* is translated into English in 1905 (Renu, 2014) and divided into fifteen chapters in which Kautilya (2000) pooled between experience and vision of his time to produce an extraordinary treatise dealing with the notions of governance, economics, politics, ecology and other issues in India. Kautilya, while specifically alluding to “Good Governance” at his time, asserted that:

In the happiness of his subjects lies his happiness; in their welfare his welfare; whatever pleases himself he shall not consider as good, but whatever pleases his subjects he shall consider as good. (Kautilya, 2000, p. 52 Chapter xix. The Duties of a King)

A cursory look at Kautilya’s *Arthashastra* implies that his values are still relevant to modern

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<sup>16</sup>A wonderful old Indian treatise on the art of government and administration, which had been written between a period of 300 and 400 B.C. It is a treatise on statecraft, economic policy, and military strategy (Renu, 2014).

<sup>17</sup>Rudrapatna Shamasastri (1868–1944) was a scholar and librarian at the Oriental Research Institute Mysore. He had discovered the manuscript in one of the libraries in India and translated it into English, the treatise is now available on [www.columbia.edu](http://www.columbia.edu)



life because a good value is eternal morality. Contributing to the debate, Renu (2014) sees that Kautilya is a philosopher, who is always remembered by his good moralities and justice, and his treatise is an eternal work, like *The Republic* of Plato, *The Politics* of Aristotle and *The Prince* of Machiavelli (Renu, 2014, p. 33). Hence, Good Governance is not a new concept (Kaufmann and Kraay, 2007), but it is Kautilya that founded the core pillars of it, which he summarized in justice and anti-autocratic tendencies to respond to citizens and protect their wealth and welfare. The concept would be developed, later, to acquire new principles and concepts, which went hand in hand with globalization or global governance. Good Governance moralities are now developed by international stakeholders and suggested as a solution to reform the economic, social, political and administrative apparatus (Sangita, 2002a). It is obvious now that governance is a way of governing by which a certain society is governed; consequently, Good Governance would be the type of approach, that reformers of “governance” would guarantee to establish a democratic society, built on good ethics and values to reform economic, social, political life for a sustainable development (Sangita, 2002b, p. 330). In this regard, the World Bank defines Good Governance as “an open and enlightened policy making; a bureaucracy imbued with a professional ethos; an executive arm of government accountable for its actions; and a strong civil society participating in public affairs; and all behaving under the rule of law” (World Bank, 1994, p. 7).

Good Governance is a good use for government power, and bad governance would be the outcome of its misuse (World Bank, 1992). It is the institution effectiveness in the management of internal and external processes for the protection of human rights, democracy and institution capacity (Kettani & Moulin, 2014; Ladi, 2008; Nanda, 2006; World Bank, 1992b, 1994). The concept of Good Governance has always been coined in the agenda of the World Bank, as a necessary conditionality for development and aid delivery, when the public sector weaknesses are consciously thought out as obstacles to the development of other sectors (Nanda, 2006). Contributing to this debate, the United Nations defines Good Governance as “the exercise of political, economic and administrative authority to manage a nation’s affairs”, characterized by citizen

participation, rule of law, accountability, transparency, effectiveness, responsiveness, strategic vision for development (UNDP, 2007, pp. 6-7). The United Nations Development Programs (UNDP) hinges on creating a culture of democracy constructed on effective, participatory, transparent and accountable governance institutions (UNDP, 1997b, 2002, 2015). UNDP considers that Good Governance and good governments are the same. Therefore, most of UNDP programs are government-supported actions to institutionalize and sustain a culture of democratic governance among governments and citizens (Joyner, 1999). It is the willingness of the United Nations to support infrastructure and institutional contexts, where governance functions. I quote, here, the General Ex-Secretary Ban Ki-moon, when he commented to the Security Council on Timor-Leste, on 19 February 2009:

...as we all know, infrastructure is not just a matter of roads, schools and power grids. It is equally a question of strengthening democratic governance and the rule of law. Without accountability, not only of the government to its people but of the people to each other, there is no hope for a viable democratic State. (United Nations Global Issues, 2016)

Bannister & Connolly (2012) in their article *Defining e-Governance* parted the concept of “Good Governance” into two fragmented types: “Structural governance” and “normative governance”. The Structural governance is concerned with the way government uses authority to influence policies, regulations and rule of law to achieve a democratic governance. However, the normative one is a set of “values and good ethics”, which are empowered by structural governance to create Good Governance. According to Bannister & Connolly (2012), these good values include “transparency, accountability, integrity, honesty, impartiality, efficiency” and other good ethics, which institutions may harvest, due to the good use of law and regulations. To sum up, structural governance role is to influence power and authority to support or achieve “normative aims”, where the absence of the structural governance ends in “bad governance” (Bannister & Connolly, 2012, p. 7). Therefore, Good Governance would be generated from all those good ethics of democratic governance, based on law, regulations and democracy, which strengths institutional contexts with citizens, businesses, employees and governments.



## 2.5 Aid Donors Intervention for Good Governance

Good Governance has become a catchword in development discourses of international and national aid donors. sustainable development is contingent on Good Governance as “goal in itself but also as a condition for social and economic development” (UNDP, 1997b). This chapter will debate the threefold relationship that exists between aid, governance and development and the roles of aid donors to improve governance for sustainable development, in different ways. The Ex-president Barack Obama Addressed the United Nations in a speech on the 27 of September 2015, saying:

No matter how much hard work is done by development agencies, no matter how large the donations and commitments that are made by donor countries, if we don't take care of some other elements of development, we will not meet the goals we've set. Number one, development is threatened by bad governance. Today, we affirm what we know to be true from decades of experience: development and economic growth that are truly sustainable and inclusive depend on governments and institutions that care about their people, that are accountable, that respect human rights and deliver justice for everybody, and not just for some. (Barack, 2015)

Effectively, the term has been widely taken up by the international stakeholders as a necessity for human and economic development and conditionality for aid effectiveness.

### 2.5.1 The World Bank and Good Governance

Good Governance is a necessary ingredient for sustainable economic development and democracy. The concept of governance is widely discussed among scholars, policymakers and aid donors, and its necessity is a growing issue, especially in developing countries. The philosophy of the World Bank is reflected in the genre of the programs and projects it finances, since the 1990s (Thomas G. Weiss, 2000). Its aid development agenda targets to reduce poverty by increasing sustainable economic development and democracy. The Bank has given greater consideration to the persistent effects of mismanagement and bad governance by reforming the quality of governance as an ultimate solution. The Bank substantially rushed to finance programs of governance and public sector reforms. The

Bank directed 48% of its loans to administrative governance, which was a bigger percentage than any other field (Thomas, 2007, p. 732). The Bank endeavours always to place a focus in its reform programs on four main axes of governance: capacity and efficiency of public sector management, accountability, predictability and the legal framework for development and information transparency (Hout, 2007, p. 25; World Bank, 1992b, p. 2). According to the World Bank (1992b), governance is “the way power is exercised in the management of a country’s economic and social resources for development” (p. 1). The Article III, section 5 and Article IV, section 10 from the Bank’s Articles of Agreement prohibits the Bank to intervene in political systems of countries, except for their economic arena (Thomas, 2007, p. 731). In this regard, I quote from the book *Governance: The World Bank’s Experience* (World Bank, 1994):

The Bank’s Articles of Agreement explicitly prohibit the institution from interfering in a country’s internal political affairs and require it to take only economic considerations into account in its decisions. Thus, the Bank’s call for Good Governance and its concern with accountability, transparency, and the rule of law have to do exclusively with the contribution they make to social and economic development and the Bank’s fundamental objective of sustainable poverty reduction in the developing world. (p. 7)

The World Bank finances programs to shape a decent environment for Good Governance; an atmosphere of a mandatory market-oriented approach that is built on transparent, accountable and regulatory frameworks (Hout, 2007, p. 27). The intensity of governance programs varies according to each country’s environment and requirement (World Bank, 1994). For example, Morocco stepped into a series of Development Policy Loans (DPLs)<sup>18</sup> to reform its governance and public administration (Harrigan & El-Said, 2010) to create a favourable atmosphere of development, investment and economy by easing and simplifying administrative procedures and regulations (World Bank, 1994). Good Governance remains, day in day out, a rising conviction for the Bank to promote human and economic sustainability. Hence, “governance ethics” have always been highlighted in the Bank’s policy dialogue with many countries (McAuslan, 1996). The Bank went further to

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<sup>18</sup>World Bank Development Policy Loans (DPLs) are programmatic loans created in 2004, which offer funding for administrative and policy reforms in the borrowing countries.



think about the necessary ethics that may raise the quality of governance. Indeed, it has chosen for six aggregate ethics that constitute Good Governance: Voice and Accountability, Political Stability, Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption (Kaufmann, Kraay, & Mastruzzi, 2007, p. 1), which the Bank labelled as Worldwide Governance Indicators (WGI). The indicators were used as a long-standing research task to measure governance in 200 countries between 1996 and 2006 (Hout, 2007; Kaufmann et al., 2007; World Bank, 1992b).

### 2.5.2 The United Nations and Good Governance

Deriving from the World Bank, the United Nations (2016) extremely believes, as well, in “democratic governance” as a key instrument which oils in sustainable development. For the United Nations (2016), well-governed countries protect human rights and ensure an equitable distribution of public wealth. The UN ex-Secretary-General Kofi Annan clearly indicates that “Good Governance is perhaps the single most important factor in eradicating poverty and promoting development” (UNDP, 2002, p. 51). In turn, the United Nations Development Programme (UNDP) works to strengthen dialogue, consensus and institution capacity buildings for a democratic governance, “helping institutions in countries to bring constitutional reforms, organize credible elections, strengthen parliaments, and address policy and institutional options for peace, risk-reduction and development through reconciliation, empowerment and inclusion” (United Nations, 2016b, p. 1). Furthermore, UNDP provides technical assistance and advice to build the capacity of institutions and individuals through a “knowledge networking” for the sharing of good moralities in the public sector. UNDP tries to put human development at the center of its Millennium Development Goals. Accordingly, the first Human Development Report is issued in 1990, with a focus on sustainable development and democratic governance as a solution for “the richness of human lives” rather than “the richness of economies” (UNDP, 2015, p. 1). The Human Development Reports are series of books published by the United Nations doomed to inspire the world in governance and sustainable development discourses to improve the prosperous, stable and equitable conditions of life (UNDP, 2002, 1997, 2015). The United

Nations is a groundwork system for the promotion of Good Governance in the world through different programs and avenues that foster impartial forums for dialogue to achieve democratic consensus and institutions. UNDP helps to strengthen the declaration of the Vienna Conference outcomes on Human Rights, which are “rule of law, democratic governance and respect for human rights” as key fundamentals for sustainable development (Patel, Naik, & Mustafa, 1995, p. 20).

UNDP aims to support all kinds of democratic transitions from bad governance to Good Governance, through organized campaigns, forums, dialogue and “knowledge networking” for the sharing of good practices among countries. The UN Democracy Fund (UNDEF), established by the United Nations in 2005, is a solid foundation for the promotion of citizen’s voice, human rights and citizen engagement in democratic processes. The majority of its funds are allocated to governments with democratic transitions to strengthen their democratic governance. The United Nations Public Administration Network UNPAN is another program that functions under the UN. The program looks to link regional with national public sector institutions through an ICT-based network to streamline the exchange of information, experience and training in the field of the public sector for Good Governance and management. UNPAN aims to improve public administration and build the capacity of governments for human and economic developments (United Nations, 2016b). In this regard, UNPAN posits that equity, participation, pluralism, transparency, accountability, rule of law, efficiency, effectiveness and integrity (anti-corruption) are all good ethics of governance and management that should be shared and circulated between local and national public institutions.

### **2.5.3 The International Monetary Fund and Good Governance**

International Monetary Fund (IMF) had been instituted along with the World Bank during the international negotiations at Bretton Woods before the end of the Second World War to finance war-torn countries with problems of “balance-of-payments” (Willett, 2001, p. 593). Its aid effectiveness has been evolving through time to reach the political reforms. IMF is, now, working along with the World Bank and UNDP under the UN system through



their different programs, but towards a unified objective which is for the promotion of Good Governance in the world. IMF supports accountability and transparency of expenditure transactions and management. In other words, IMF's governance-related reforms focus more on economic and macroeconomic aspects of governance (IMF, 1997; Kapur, 1998). In 1996, IMF asserted in its *Partnership for Sustainable Global Growth* that economies must prosper, but in anti-corrupted environments with the rule of laws, efficiency and accountability (IMF, 1997). Indeed, the IMF director Michel Camdessus, while addressing the Economic and Social Council, proclaimed that:

Good Governance is important for countries at all stages of development. Our approach is to concentrate on those aspects of Good Governance that is most closely related to our surveillance over macroeconomic policies-namely, the transparency of government accounts, the effectiveness of public resource management, and the stability and transparency of the economic and regulatory environment for private sector activity. (IMF, 1997, p. 3)

To this end, IMF has been supporting member countries including Morocco, as well, by offering technicalities in governance-related areas, including public expenditure and public financial management" (IMF, 2016). In all these ways, IMF has a strong willing to bring up Good Governance "to increase the likelihood of exposing instances of poor governance" that impacts negatively on sustainable peace, security and development of nations (IMF, 1997, p. 2).

#### **2.5.4 USAID and Good Governance**

Pushed by international aid donors, "Good Governance" has become the cornerstone of development. The US Agency for International Development (USAID) had been created by John. F. Kennedy, in the United States, particularly for International Development, by an executive order in 1961. USAID assisted in promoting Good Governance as a part of their assistance/aid to developing countries (Sangita, 2002b). USAID contributes to the agenda of governance and development by strengthening economic governance. USAID (2013) includes that "legal and social institutions that support economic activity and economic transactions" must operate under accountability and transparency. USAID does not show

any definite attachment towards specific governance values, but it supports those of the World Bank, to benchmark the quality of governance, and provide citizens with useful information for holding their governments accountable. USAID focuses more on transparency and accountability to serve as a model of open and collaborative government to achieve the Millennium Development Goals (USAID, 2013, pp. 19-20).

USAID believes that Good Governance has the power to increase public and private investment and activity which will end up in multi-sectoral coordination for the end of hunger, undernutrition and poverty in poor countries. In 2012, USAID established a Center of Excellence on Democracy, Human Rights and Governance. The center is considered as a global laboratory for “evidence-based” studies in democracy, human rights and governance. The center shares its studies and measurements with other international aid donors. According to USAID, sustainable development can be achieved by economic growth, democracy and governance and social transition (USAID in Nanda, 2006), through nine essential axes which are “ownership, capacity building, sustainability, selectivity, assessment, results, partnership, flexibility, and accountability” (p. 280).

## 2.6 Measuring Good Governance

### 2.6.1 Governance Dimensions

Measuring governance is a challenging task because of its multi-dimensional characteristics, contexts and definitions (World Bank, 1992a). Effectively, there is an abundant amount of literature that looks to identify the characteristics, contexts and definitions of governance (Arndt & Oman, 2006; Brillantes, Reforma, & Reyes, 2007; Kaufmann & Kraay, 2007a; UNDP, 1997a, 2009a; World Bank, 1992a), in order to identify its constitutes and indicators. So far, there is no definite form of governance (World Bank, 1992a), but the UNDP (1997a) borders the concept of governance by three principal margins: economic, political and administrative.

- **Economic governance** is the process of decision-making that affects a country’s economic activities and its relationships with other economies. It has major



implications for equity, poverty and quality of life.

- **Political governance** is the application of state power to formulate policies, rule of law, decision-making in a democratic way.
- **Administrative governance** comprises systems and institutions for policy implementation. It is the apparatus which includes the political and economic dimensions of governance (UNDP, 1997a, 2007).

In this way, Good Governance is generally perceived as a management of economic and political affairs for human and economic development; within a bureaucracy, which is “imbued with a professional ethos” (World Bank, 1994, p. 7). An ethos that changes according to governance context and dimension to constitute “an indicator”, in governance benchmarking.

The diversity of governance ethics and their dimensions triggered a growing demand among development researchers, aid donors, aid recipients and decision-makers to measure and benchmark them, since the 1990s (Thomas, 2007). Indeed, the roles of Good Governance in democratic, bureaucratic, social, human and economic developments have switched it into a development project in itself; the fact that pushed and shoved aid donors and researchers to develop more “refined and nuanced” constituents of Good Governance (Kaufmann & Kraay, 2007a, p. 2). In this regard, a number of aggregate governance indicators have been produced as determinant yardsticks for gauging governance.

### 2.6.2 Governance Indicators

Good Governance can be described objectively as “good”, if its components, indicators and characteristics are positive or “good” (UNDP, 2009a). Good Governance is disaggregated from several components, which constitute indicators or statistical measures, used to convert complex records into expressive numbers and statistics to policy makers and public opinion (UNDP, 2009a). Hence, an indicator gives a clear picture about a relevant issue or question, quantitatively-expressed in rates, ratios, percentages or numbers and sometimes in a qualitatively-based information, which could be converted

into numbers later (OECD, 2008). Davis, Kingsbury, & Merry (2012) in their article: *Indicators as a Technology of Global Governance* highlight that indicators of Good Governance should include four features, respectively:

1. The indicator should represent a phenomenon in its *de facto*.
2. The indicator should enable comparison, rankings and assessment.
3. The indicator should simplify the complex social phenomena in a study.
4. The indicator should have the potential to be used for evaluative purposes (pp. 75-76).

In this direction, governance indicators are names of the test patterns and practices, they measure in reality (*de facto*) (UNDP, 2009a). Arndt & Oman (2006) in their book *Uses and Abuses of Governance Indicators*, posit that there are “140 user-accessible sets of governance indicators”, that include as well “thousands of individual indicators” that contributed, in a way or in another, to the appearance of other measured governance indicators (p.30). Therefore, measuring governance is a challenging task, because of its multi-dimensional characteristics, contexts and definitions (World Bank, 1992a).

### 2.6.3 Governance Measurement: De Jure rules and De Facto Outcomes

Governance comprises rules-based indicators and outcome-based indicators according to the context and the country in which it is measured. Indeed, the measured indicators on the ground are *de facto* governance outcomes of *de jure* rules found in laws, regulations, institutions and the constitution of any country. To make this distinction, Kaufmann & Kraay (2007) posits that the *de jure* indicator of *corruption* is measured by its rules-based outcomes, measuring whether countries have institutions and constitutions that ban corruption, for example. However, *de facto* indicators measure the effect and force of these laws and institutions to cut corruption, in reality. The UNDP's book *Planning a Governance Assessment: A Guide to Approaches, Costs and Benefits* indicates that the *de facto* is concerned with what happens in practice, which is “measured by using objective data or perception-based data”. An example here might be to ask citizens to which extent freedom

of speech is allowed in their country. In turn, the *de jure* refers to the existence of formal rules found in documents, laws, regulations and the constitution. These indicators usually rely on objective indicators. An example here might be the existence of a law or constitutional provision, protecting free speech in reality (UNDP, 2009b, p. 12). For Kaufmann & Kraay (2007), stakeholders and researchers should decide which indicators of governance to assess in a country. However, the best way of doing it is to assess both the *de jure* and *de facto* forms of governance, since formal documents are just ink on paper in some countries. Consequently, “a feature of efforts to measure governance is the preponderance of indicators focused on measuring *de facto* governance outcomes and the paucity of measures of *de jure*” (Kaufmann & Kraay, 2007b, p. 2). In reality, the set of indicators discussed in the above section provide a leading example of major governance indicators, to be measured within *de jure* and *de facto* taxonomies. To sum up, the following dissertation will try to compare between the *de jure* rules (document analysis) and *de facto* outcomes (quantitative analysis), measuring the effect of eGovernment WGA on Good Governance, between offices.

## 2.7 Measured Governance Indicators

### 2.7.1 Worldwide Governance Indicators (WGI)

The World Bank ranked 200 countries and territories between 1996 and 2006, in a long-standing research with respect to six variables that constitute Good Governance, according to the Bank (Kaufmann & Kraay, 2007a). The World Bank measured Voice and Accountability, Political Stability and Violence, Government Effectiveness, Rule of Law and Control of Corruption as pivotal constituents of Good Governance (Hout, 2007; Kaufmann, 2005; World Bank, 1992a). The Worldwide Governance Indicators (WGI) have been used as determinant yardsticks to scale and compare governance between countries. These indicators are based on hundreds of original other indicators, generated from 30 organizations, which included thousands of citizens, enterprise managers and experts (Kaufmann & Kraay, 2007a). However, the variables, used by the Bank, have yielded

critiques and discussions among aid recipients, researchers and policymakers.

The Bank's measurement have been critiqued for being disaggregate and subjective, simply because surveys have been divided into taxonomies and groups, therefore, they do not stake to a unified methodology. Furthermore, these measurement indicators are figured in terms of aid allocation and aid efficiency, hence, they do not reflect the *de facto* of Good Governance (Apaza, 2009). Kaufmann et al. (2007) answer that most of these criticisms are invalid, claiming that governance indicators are “outcome-based” and not “rule-based” (p. 9) and that the governance measurement is dependent on the milieu in which it is wanted to be measured. Indeed, building governance indicators is a continuing project (Apaza, 2009), and the Worldwide Governance Indicators (WGI) do provide an in-depth methodology for individual countries to benchmark themselves against other nations. The principal indicators in governance measurements are based on hundreds of other underlying indicators in political, administrative, economic, social or environmental contexts. As a result, Kaufmann's measurement for governance in “209 countries and territories” over eight years, reveals that there is a continuous modification in governance variables and values, that change overtime (Kettani & Moulin, 2014).

### 2.7.2 UNDP Governance Indicators

It is apparent that *Good Governance* is an accumulation of indicators, derived from the field in which it is assessed; “it is up to a society to decide which characteristics are most important within each context, and hence, which ones require intervention toward improvement” (Kettani & Moulin, 2014, p. 76) . In this vein, UNDP has disaggregated governance into a broad range of indicators, claiming that governance is “the exercise of political, economic and administrative authority to manage a nation's affairs”, under nine principal characteristics of governance that include all of “citizen participation, consensus oriented, rule of law, accountability, transparency, effectiveness, responsiveness, and strategic vision” (Forsythe, 1997; Joyner, 1999; UNDP, 1997b, 2002, 2007; United Nations, 2012, 2016b). UNDP omitted the indicator of *Corruption* from its assessment, though it is a powerful element in the making of Good Governance. For the UNDP, Good Governance is



contingent on a good performance of public institutions, poverty reduction and citizens' wellbeing, that helps to shape an attractive environment for investment and development (Kaufmann, 2005; Kettani & Moulin, 2014).

The UNDP's book entitled *Governance and Sustainable Human Development* (1997a) articulates that Good Governance is a composition of nine indicators or principles that have been defined, accordingly, by the following:

- Participation: All men and women should have a voice in decision-making, either directly or through legitimate intermediate institutions that represent their interests. Such broad participation is built on freedom of association and speech, as well as capacities to participate constructively.
- Rule of law: Legal frameworks should be fair and enforced impartially, particularly the laws on human rights.
- Transparency: Transparency is built on the free flow of information. Processes, institutions and information are directly accessible to those concerned with them, and enough information is provided to understand and monitor them.
- Responsiveness: Institutions and processes try to serve all stakeholders.
- Consensus orientation: Good Governance mediates differing interests to reach a broad consensus on what is in the best interests of the group and, where possible, on policies and procedures.
- Equity: All men and women have opportunities to improve or maintain their wellbeing.
- Effectiveness and efficiency: Processes and institutions produce results that meet needs while making the best use of resources.
- Accountability: Decision-makers in government, the private sector and civil society organizations are accountable to the public, as well as to institutional stakeholders.

- Strategic vision: Leaders and the public have a broad and long-term perspective on Good Governance and human development, along with a sense of what is needed for such development. There is also an understanding of the historical, cultural and social complexities, in which the perspective is grounded (UNDP, 1997a).

The fact that these indicators have been widely cited in much literature (Kettani, Gurstein, & El Mahdi, 2009; Kettani & Moulin, 2014; Kettani, Moulin, Gurstein, & El Mahdi, 2008; UNDP, 1997a), indorses that they won a universal acknowledgment. These UNDP-based indicators foster a “citizen-centered” approach, based on political, social and economic dimensions of governance, in which voices of the poorest are heard in decision-making, through democratic institutions of transparent and accountable systems, which must operate under a fair rule of law, without gender or racial discrimination (UNDP, 1997a). In this regard, UNDP’ s indicators establish a solid foundation for a democratic institution in the world, so as to eradicate poverty, expand human rights, fundamental freedoms and sustainable development. Furthermore, these indicators have inspired many authors and stakeholders to feed into governance and public service delivery reforms and assessments (Kettani & Moulin, 2014; UNDP, 1997a, 1997a, 1997c, 2007).

### 2.7.3 eFez Governance Indicators

The eFez Project is a good example of G<sub>2</sub>C eGovernment initiative in Morocco. The project connects citizens with electronic kiosks to get their birthday certificates, in the municipality of Fez. Meanwhile; the pioneers of this project have translated their field work into many research projects to enhance eGovernment roles between government and citizens (Kettani et al., 2009, 2008; Kettani & Moulin, 2014). The research evaluates “the results, outcomes, and effects” of service transformation after its automation in the municipality of Agdal, Fez (Kettani et al., 2008). An electronic database is developed by Enhanced Technologies in order to deliver Birth Certificates to local citizens through touch screen kiosks and eFez portals, doomed to reform and increase governance in front offices. Kettani et al. (2008) in their article *eGovernment and Local Good Governance: A Pilot Project in Fez, Morocco* summarize how they inspire from the UNDP governance indicators to

investigate the relationship between the eFez project implementation and Good Governance. More specifically, Kettani et al. (2008) resort to the UNDP-based indicators of Good Governance, to reproduce front office-related definitions, after being “tailored and adapted” to their project type (Kettani et al., 2008, p. 10). Therefore, the inclusiveness and comprehensiveness of the UNDP indicators, inspire Kettani et al. (2008) to adapt them into their project.

The authors measured local governance before and after the installation of BEC kiosks in different municipalities in the city of Fez. The study reveals that the manual delivery of birthday certificates was bad-governed, corrupt, inefficient, late and archaic (Kettani et al., 2008, p. 10); however, the aftermath automation and reengineering enabled for an efficient and effective, transparent, accountable, equal and citizen-friendly delivery of BC, in which “Good Governance” substituted “bad governance” in the municipalities of Fez. The study won three prizes during the period 2006-2007, namely The Moroccan national prize of *eMtiaz*<sup>19</sup> in 2006, The award of Technology in Government in Africa (TIGA), in 2007, and the United Nations Public Service Award for “Improving the delivery of Services”, in 2007, as well (Kettani et al., 2008, p. 16).

#### 2.7.4 Ibrahim Index of African Governance Indicators

Dr. Mohamed (Mo) Ibrahim<sup>20</sup>, from Sudan, provides an annual report on the quality of governance about each African country, belonging to the sub-Saharan Africa. The assessment of governance in Africa is based on the Ibrahim Index of African Governance (IIAG) (Ibrahim & Gouillart, 2009), which is formerly established within the John F. Kennedy School of Government at Harvard University (Rotberg, 2009). According to Ibrahim & Gouillart (2009), Good Governance is “the delivery of high quality political goods to citizens by governments of all kinds” (Rotberg, 2009, p. 113). Citizens pay taxes to their governments monthly, so as to receive, in turn, for domestic services, beginning by physical

<sup>19</sup>Organized by Ministry of Public Service and Administrative Modernization, *eMtiaz* is an annual eGovernment symbolic award which is offered for the best eGov service. It aims to create concurrence between the various public actors in the development of electronic public services.

<sup>20</sup>A Sudanese-British billionaire businessman, who founded Celtel International in 1998. He is more attached to Africa in which he encourages good governance as a solution for sustainable development. Dr. Mohamed (Mo) Ibrahim created the Mo Ibrahim Foundation and the Ibrahim Index of African Governance.

security and safety (Rotberg, 2009). The Ibrahim constructed governance indicators to benchmark public service provision, according to the African context. Since 2007, the study is intended as a unique contribution to improve the quality of governance in Africa, debating administrative performances in the continent (Farrington, 2009). The Ibrahim governance indicators are disaggregated into five “Basic Categories” (BCs) which are:

1. Safety and security;
2. Rule of Law, transparency and corruption;
3. Participation and human rights;
4. Sustainable economic opportunity;
5. Human development.

The score generated from these variables gives a clear vision for each African country about the delivery of core political goods and services; therefore, governance statistics in the different states of sub-Saharan Africa (Rotberg, 2009).

## 2.8 Front Office and back office Governance Indicators

Good Governance is a concept that has recently been used frequently in political studies, public administration and development management (Bhatnagar, 2004; Fukuyama, 2013). Good Governance is “the exercise of political, economic and administrative authority to manage a nation’s affairs” (UNDP, 2007, pp. 6–7), between governments, citizens and businesses, at national or local levels (Heeks, 2006). Therefore, I believe that efficient front end service delivery to citizens or businesses is contingent on a good back office integration and coordination. Accordingly, reforming governance through the automation of public administration is a two-edged process, directed to increase Good Governance ethics (indicators) in front and back offices (United Nations, 2008). Kettani & Moulin (2014) quoted that:

eGovernment is a means for creating Good Governance as it improves both the back office (government internal operations and relations) and the front



office (government relations with citizens and other external stakeholders) in such a way that makes Good Governance a reality. (p.80)

Henceforward, the debate of this research is oriented to look at eGovernment Whole-of-Government approaches to integrate back offices vertically and horizontally for Good Governance. Accordingly, the federation of back offices, through ICTs, would generate other governance values or indicators, different to those produced by the automation of front offices. In other words, eGovernance is believed to exercise a direct impact on Good Governance in front and back offices (United Nations, 2014). So, what are the new Good Governance indicators that are produced under the impact of electronic integration and interoperability?

### 2.8.1 Front Office Governance Indicators

The automation of front office service delivery has positively impacted government-citizens (G<sub>2</sub>C), government-government (G<sub>2</sub>G) and government-businesses (G<sub>2</sub>B) outcomes. It is believed to increase transparency and accountability and service efficiency, reducing corruption between citizens and public officials (United Nations, 2008b). Indeed, eGovernment is offered “to promote responsiveness of government institutions to citizens’ growing demands” (Kettani & Moulin, 2014, p. 47), like municipal licenses, transport permits, property registration and tax collection (Bhatnagar, 2004; Kandhro, 2011). The eFez Project is a premiere experience carried in Morocco to facilitate the BC delivery for citizens in the city of fez. The *de facto* effect of eFez Project on local governance was assessed in front offices, basing on the UNDP indicators. Accordingly, Kettani & Moulin (2014) logically related the UNDP governance indicators to his front office assessment (G<sub>2</sub>C), in a qualitative and quantitative methodical approach, (Kettani & Moulin, 2014, pp. 84–85).

- Transparency: eFez created visible transactions between the municipality and citizens.
- Effectiveness and efficiency: eFez offered for an optimum service delivery for citizens.

- Participation: eFez involved citizens legally to shape services for their advantage.
- Equity: eFez allowed an equal service delivery between citizens.
- Rule of law: eFez reinforced the application of laws and regulations in front offices (the first come, the first served).
- Accountability: eFez improved accountability of officials.
- Responsiveness: eFez made the municipality more responsive to citizens.

Kettani & Moulin (2014) did not assess two indicators of UNDP, which are “strategic vision” and “consensus orientation”, claiming that they are not applicable to their project (pp.84–85). However, I see that the authors should have measured “corruption”, though it is a World Bank indicator, as a necessary indicator for Good Governance in front deliveries. Indeed, eFez must have reduced for any predictable corruption opportunity, owing to the direct contact of citizens with automated kiosks, because the removal of intermediaries can decrease officers bribe and corruption.

Bhatnagar (2004) in a distinguished book entitled *eGovernment: from vision to implementation: a practical guide with case studies*, introduces twelve successful eGovernment stories that highlights the roles of eGovernment for Good Governance benefits. The book is divided into seven practical chapters, which provide real case studies of eGovernment effective projects that serve citizens and business. The book is presented for practitioners, researchers and students, as “a practical guide” to explain front and back office use of eGovernment and its positive outcomes in local, state or national governance. The study focuses on different indicators to assess the impact of eGovernment on Good Governance, namely transparency, accountability, corruption, service delivery, cost reductions, people empowerment and economic development (Bhatnagar, 2004, pp. 37–38). At the end, the author concludes that eGovernment roles can reform the public sector and advance the agenda of Good Governance in the world, through the “re-engineering of back office procedures” (Bhatnagar, 2004, p. 89). Consequently, back office integration through ICT is a prerequisite for a good service delivery at front offices.



Nevertheless, few literature has been texted on back office integration and interoperability for Good Governance. So, what are the gains generated from the deployment of eGovernment applications in back offices?

### 2.8.2 Back office Governance Indicators

A number of authors have advanced different theoretical approaches to the deployment of ICTs in front-line service delivery where the deployment of technology included back offices as well (Westholm, 2005). ICT and Internet in public administration has given birth to eGovernment (Bhatnagar, 2004), which has increasingly succeeded in integrating government works, operations and transfers in a Whole-of-Government Approach, serving communities, businesses and governments themselves. Indeed, the United Nations (2008) survey “From eGovernment to connected Governance” stresses that government interoperability and connectedness is about a “bigger and better front-end with a smaller and smarter back-end” (United Nations, 2008b, p.6). According to the United Nations (2008), eGovernment WGA is a significant step to an efficient coordination and cooperation within and across government layers, changing the way governments operate internally and externally. Internally, the Whole-of-Government Approach has the power to improve efficiency, coordination and communication, transparency, avoiding duplication of efforts and work, reducing transaction costs and simplifying bureaucratic procedures, with a seamless and secure information sharing between agencies. Hence, connected governance can contribute to an efficient and faster service delivery in front ends, increasing citizen participation in service qualities for their empowerment (United Nations, 2008b, pp. 7–8). The United Nations (2014) survey *eGovernment for the Future We Want* lists all the benefits, related to the orchestration of back offices. These indicators or values include:

- Effectiveness and responsiveness of governments, especially towards complex administrative issues.
- Simplification of Administrative procedures.
- Reduction of work and paper duplications, owing to unified rules and database.

- Cost-effectiveness and time-savings, which increase citizen's trust in their governments.
- Decentralization of public service delivery through ICTs, which results in one-front-end delivery of public services and goods.
- Increased transparency and accountability mechanisms for cross-agency collaboration.
- Integrated and seamless service delivery fosters, in turn, an innovative approach to complex problem solving.
- The culture of collaboration and coordination build a shared strategic vision of public agencies, and discourages work in silos (United Nations, 2014, pp. 78–82).

Indeed, connected back office arrangements through eGovernment is deemed to decentralize work flows from ministries to their delegated offices in urban and rural areas, contributing to the participation of all public administration in decision-makings and service delivery. According to Haque & Pathrannarakul (2013) , back office integration has the power to transform governments from “stove piped working” siloes into unified “Whole-of-Government” institutions that share services in order to increase efficiency, simplify procedures and reduce transaction costs and duplication among national and local governments (Haque & Pathrannarakul, 2013, p. 32). To summarize, eGovernment is believed to better manage the internal institutional linkages, between different ministries and units, after the delegation of the administrative authorities from national to local public agencies. The integration of internal work flows and processes by the eGovernment WGA is deemed to upsurge the governance values, raised by the United Nations, so far (United Nations, 2008b, 2014).

Therefore, Good Governance in back office (G<sub>2</sub>G) would be recognized through the satisfaction of employees, instead of citizens (G<sub>2</sub>C), on eGovernment abilities. eGovernment is believed to integrate vertical and horizontal back office workflows to get rid of “siloesd” administrations in the interim of enhancing good ethics between all the



layers of administrations (G<sub>2</sub>G). Integration and interoperability is believed to improve decentralized service delivery and decision-making, efficiency and effectiveness, cost-effectiveness, transparency, accountability, participation, responsiveness, strategic vision, seamless coordination, rule of law, administrative simplification, data and information security and cut duplication of tasks, logistics and human resources (United Nations, 2008b, 2014).

### Decentralization

Decentralization is the “transfer of political, administrative and fiscal authority from the central government to subnational governments and authorities” (Rondinelli, 2007, p. 239). The concept of *decentralization* has spawned a large array of literature in political, economic and governance studies, especially in decision-making and service delivery (Shah, 2007). The evolution of decentralization, delegation and regionalization has been noticed intensely at the beginning of the twenty-first century as a public demand towards democracy, administration and governance reforms (Tierney, 2006, p. 63), for its ability to bring government decision-making more closer to citizens; therefore, simplifying administrative procedures (Shah, 2007, p. 244). According to Anwar Shah (2007), decentralization can be more effective to decrease corruption and increase accountability of public authorities to citizens and governments. Shah (2007) believes that decentralization is a real delegation of authority, bureaucracy and governance to local authorities linked with accountability of central authorities. Accountability and surveillance are deemed to reduce officers “discretion” in decision making and service delivery, “reducing the potential for corrupt behavior” (Shah, 2007, p. 51), especially in the devolution of budget management, human resources and financial responsibilities. Hence, a good decentralization enables to check upon efficiency and responsiveness in local administrations (Hankla, 2009). It is a necessary step towards Good Governance (Kristiansen, Dwiyanto, Pramusinto, & Putranto, 2009). Rondinelli & others (2007) see that decentralization can promote Good Governance and effectiveness in public sector through participation of local citizens and public institutions in national policies and decisions.

Furthermore, checks and balances between central governments and their localities can foster a culture of effectiveness, transparency, accountability, participation and pluralism in decision-making and service delivery. Decentralization reforms have colored policies and democracies in the world for the creation of performance and Good Governance in local provinces (Hydén & Samuel, 2011, p. 139). The reason why the Global Development Research center (GDRC), a branch under the UNDP, succeeded to assess Good Governance by other different qualities, to those of UNDP including decentralized management (Kandhro, 2011; UNDP, 1997a). Now, decentralization aims more to develop an effective public administration with modern technologies and infrastructures that exist, so far. ICTs offer concrete opportunities for local performance, transparency, participation and decentralization, reducing agency costs and leading more to decentralization (Malone & Crowston, 1994, p. 24). In this direction, eGovernment will encourage the decentralization of administrative functions (AlGarni, 2015), and work processes to bring the state closer to citizens (Lister, 2010).

Most governments have officially declared to mobilize necessary resources and logistics for decentralization and regionalization in their governments, involving localities in a self-governance process “solving their own problems, realizing their civic responsibilities, and carrying out projects on a self-help basis” (United Nations, 1999, p. 24). Morocco, for example, engaged lately in a series of administrative reforms opting for regionalization and decentralization to build the rule of law, human rights and economic prosperity (Zemrani, 2014). Morocco’s option for the “politics of proximity” is officially declared by the King Mohammed VI, as a necessity for an efficient service delivery. The last speech delivered on Friday 14th October 2016 by his majesty before the members of the Parliament’s two houses (Representatives and Advisors) has debated the Moroccan urgent need for an effective public administration, which is “a yardstick of a nation’s progress”, the King said. More broadly, the King’s speech is a citizen-centric discourse that covered the public sector failure to serve the Moroccan citizens in a bureaucracy that has been overwhelmed by corruption and incompetence. The King lamented politicians and public officers for their inefficient services delivered to citizens and investors, in spite of the considerable reforms



carried lately in the sector, “to keep up with the progress Morocco is making”. His Majesty mentioned that decentralization and regionalization, family law, corruption and abuse of power, costs reduction, administrative simplification, responsiveness, accountability and sanction mechanisms are still weak mechanisms of Good Governance in Morocco, to be urgently reformed as a consequence. His Majesty’ speech focused more on the roles of decentralization and advanced regionalization<sup>21</sup> as big sails for Good Governance in public administration:

...What is the use of the letter I addressed to the Prime Minister in 2002, and what is the use of regionalization, decentralization and devolution if the same old situation remains, and the same old problems persist? Advanced regionalization, which has become a tangible reality, is the basis state agencies should build on to make their services as well as decision-making centers readily available to the citizens..., his Majesty stated.

Mohammed VI continued to divulge his frustration against the delays marked in the delivery of several documents and decision-making, owing to “lack of coordination between the state agencies concerned”. At the end of his speech, Mohammed VI, called the public agencies to integrate and coordinate their services in a Whole-of-Government Approach through eGovernment, saying:

eGovernment services should be offered across the board and in an integrated manner to ensure collective access to information by all sectors and services. The use of information technology makes it possible to facilitate quick citizen access to services, without having to go to state agencies and interact with the staff, which is the main reason for the prevalence of corruption and abuse of power, the King said.

Source: (Morocco World News, 2016).

### Efficiency and Effectiveness

Internal effective integration strategies would lead to efficient and effective internal and external transactions. The United Nations experts (2003) advance a rudimentary definition

<sup>21</sup>A new process which partitions Morocco into twelve regions, in which each region is independent with its local governance of its social and economic resources to achieve sustained development, supported by its local actors. A growth which enables all the regions to shape their destiny within the framework of the Kingdom’s territorial integrity.

for the notion of efficiency and effectiveness, as it is summarized in this quotation:

In an attempt towards improving cost effectiveness and efficiency, global leaders have been quick to seek the regulatory and administrative reform necessary for the integration of e-networking into G<sub>2</sub>G and G<sub>2</sub>C interactions. Over time this has evolved into a focus on employing a one-stop-shop portal for the integrated delivery of information and services for convenience, effectiveness and empowerment. (United Nations, 2003a, p. 25)

The definition has been completely elucidated by the UN experts in 2008. Accordingly, efficient and effective back office e-networking is reckoned to increase productivity, reduce errors, driving for cost savings within and between agencies so as to generate satisfaction among employees. United Nations (2008) believes that efficient and effective back office e-networking transactions must increase visibility and transparency in workflows, managing myriad transactions, in streamlined manner, and in appropriate cycle times that meet deadlines, between different back offices. Consequently, back office efficiency would render progress to decision-making, through extensive participation of government layers and visibility of the workflows (OECD, 2005). Efficiency is more focused on the achievement of maximum objectives with least time and effort (cost effective), where effectiveness is primarily concerned about the results and not the resources invested on it. Hence, the concept of efficiency is related to cost-effectiveness. Efficiency assesses performance and productivity of resources invested to carry a certain activity with desired objectives, where cost-effectiveness reflects the relationship between the invested resources (input) and results achieved (output) vis-à-vis those invested resources (OECD, 2013, p. 56).

### **Cost-effectiveness**

eGovernment can generate important cost savings to citizens in front office and to governments in back offices. Indeed, previous studies have categorized eGovernment as “the use of ICT to promote more efficient and cost-effective government, facilitate more convenient government services” (Bhatnagar, 2004, p. 19). For the United Nations (2008), eGovernment Whole-of-Government Approach can streamline processes and reduce costs.



The United Nations in its survey *eGovernment for the Future We Want* encourages the orchestration of agencies through integrated approaches in order to decrease costs, energies and duplication (United Nations, 2014, p. 97). Misuraca (2007) in her book *E-Governance in Africa, From Theory to Action: A Handbook on ICTs for Local Governance* introduces eGovernment as a solution for “improved interactions with business” resulting in “less corruption, increased transparency, greater convenience, revenue growth and/or cost reductions” ( p. 28). In this respect, OECD (2005) in its *eGovernment for Better Government* focuses on how to interpret a vision of user-focused eGovernment into real procedures and approaches to achieve a more cost-effective public administration. The study encourages coordination and Whole-of-Government approaches as effective solutions to hold departments accountable to each other. For the OECD (2005), eGovernment back office consolidations can synchronize mechanisms in order to “establish cross-linkages within government in order to make it more responsive and to break out of stove piped ways of working” (p. 165).

### Transparency

Transparency is generally defined as “the free flow of information” (UNDP, 1997a, p. 14). It comprises “two distinct concepts: *trans* meaning movement and *parent* meaning visible. Transparency is letting the truth be available for others to see if they so choose, or perhaps think to look, or have the time, means, and skills to look” (Oliver, 2004, p. 3). Literally, it is the ability to have access into information for accountability. Indeed, “a transparent institution is one where people outside or inside the institution can acquire the information they need to form opinions about actions and processes within the institution” (Lindstedt & Naurin, 2010, p. 304). Transparency is essential for the making of Good Governance in public administration. According to Jain (2012), publicity and transparency of information empowers accountability mechanisms for Good Governance between institutions. Hence, it is an “effective medicine” to cure corruption and bribery. Publicity of information and transparency can increase accountability and reduce transaction costs in front and back offices by making information available on screens (Lindstedt & Naurin,

2010).

As a matter of fact, information is a power; it is essential to Good Governance. Transparent activities and processes between governments are able to foster a climate of openness, clarity, accountability between administrations and participation of all governments in governance (United Nations, 2008b). Today, governments are investigating how to exploit their eGovernment investments and infrastructures to drive through necessary reforms in their public sectors for transparency and Good Governance, since ambiguity and lack of transparency are diseased environments where inefficiency, corruption and bribery could subsist. Now, the Whole-of-Government Approach aims to increase transparency between institutions for a transparent front office delivery. The new culture of “collaborative governance” is a good effort to discourage governments working in silos, which is per se a necessary reform to increase transparency and accountability between offices through integrated ICTs (United Nations, 2014, p. 81). In this direction, Lathrop & Ruma (2010) see that a transparent government drives “transparency throughout its operations; and behaves not as an isolated department or jurisdiction, but as something new- a truly integrated and networked organization” (p.18). Transparency and participation are very essential to establish accountability between institutions, evaluating each other’s performance for efficiency and effectiveness in service delivery (Oliver, 2004; Parigi, Geeta, & Kailasam, 2004; UNDP, 2009a).

### **Accountability**

Accountability is fundamental to Good Governance. Recently, there has been a rising controversy within academia on the notion of accountability as an essential term to concept for the making of Good Governance in front and back offices. Broadly speaking, accountability happens wherever there is transparency and clarity of information (UNDP, 1997a). Indeed, “for accountability to function, there must also be transparency” (Lister, 2010, p. 8). Generally, accountability is being questionable to a certain individual or organization to provide evidence or explanation for actions (Hydén & Samuel, 2011; Lindstedt & Naurin, 2010). According to Hydén & Samuel (2011), the concept of



accountability contains two different stages: “enforcement and answerability”; the enforcement of citizens and public institutions and the answerability of public government and its officials to provide answer and explanation for actions, decisions and efficiency (Hydén & Samuel, 2011, pp. 70–72). Public institutions may be held accountable mutually for each other, assessing the performance of public institutions and their officials “to their full potential, providing value for money in the provision of public services, instilling confidence in the government and being responsive to the community they are meant to be serving” (OECD, 2011a, p. 43). Therefore, accountability is important to citizens as far as its importance to governments themselves, inquiring about performance of mechanisms and programs that can make public administration perform better (Shah, 2007), eliminating corruption and promoting transparency and empowering the rule of law in public institutions (Kaufmann, 2005). Accountability is often distinguished as either ‘horizontal’ or ‘vertical’ (UNDP, 2013). However, accountability is identified in nine different forms and definitions, according to the context in which it functions:

1. **Social accountability** refers to the enforcement of citizens and civil society and the answerability of the state, which is held accountable for its actions, performance and decisions (Hydén & Samuel, 2011; Lister, 2010; Shah, 2007; UNDP, 2013).
2. **Upward accountability** refers to the answerability of local and delegated offices to the enforcement of their central and national offices or ministries (Hydén & Samuel, 2011; Lister, 2010).
3. **Downward accountability** refers to the answerability of central and national offices or ministries to the enforcement of local and delegated offices, the case of Ministry of Finance answerability to local provinces and municipalities to receive their share of funds (Hydén & Samuel, 2011; Lister, 2010; Shah, 2007; UNDP, 2013).
4. **Vertical accountability** refers to the answerability of the state under the enforcement of external voices such as citizens, political parties, mass media and NGOs that look to enforce standards of Good Governance and performance on officials (Hydén & Samuel, 2011; Lister, 2010; Shah, 2007; UNDP, 2013). Generally, vertical

accountability happens “when the state is held to account by non-state actors” (Shah, 2007, p. 140).

5. **Horizontal accountability** refers to the answerability of institutions, holding each other accountable for Good Governance or against abuses of power (Hydén & Samuel, 2011; Lister, 2010; Shah, 2007; UNDP, 2013). Horizontal accountability prevails within the state organizations (UNDP, 2013). This type of accountability is crucial to evaluate how well the joint-up agencies operate to generate effective sanctions on power abusers (Odugbemi & Lee, 2011).
6. **Hybrid accountability** refers to the enforcement of participatory budgeting, report cards and citizen audits, seeking to supervise the performance of state agencies (Hydén & Samuel, 2011; Lister, 2010; Shah, 2007; UNDP, 2013).
7. **Domestic accountability** refers the interwoven process of accountability relationships, which calls for a domestic interoperability between vertical, horizontal, downward, upward, hybrid and social accountability under a Whole-of-Government Approach in order to bridge the traditional forms of political accountability with the new forms of accountability for Good Governance (Hydén & Samuel, 2011; Lister, 2010; Shah, 2007).
8. **Mutual accountability** refers to mutual forms of accountability that necessitate the enforcement aid donors and answerability aid recipients, for example. This type of accountability is expected to strengthen aid effectiveness (Hydén & Samuel, 2011; Lister, 2010).
9. **Outward accountability** refers to the enforcement of external donors and the answerability of national actors involved in development programs. Such self-assessments are supposed to improve and display realities of development and Good Governance in developing countries (Hydén & Samuel, 2011; Lister, 2010).

This research paper is more concerned about “horizontal accountability”, than any other type of accountability, as a way to reinforce “the core of a national integrity system” (UNDP,



2007, p. 128). In reality, the Whole-of-Government Approach (WGA) is intentionally suggested to horizontal and mutual accountability mechanisms in order to improve internal government efficiency, especially between institutions of shared service delivery. Theoretically, the new decentralized budgeting systems in the world, including the GID system in Morocco, were hosted for more accountable, and transparent expenditure management between local and national offices (Kristiansen et al., 2009). In general, horizontal accountability is the stage, where public agencies are held accountable to each other, “ensuring that democratic principles are adhered to by all actors”, before they are held accountable to external actors (Norris, 2009, p. 278). According to the United Nations (2014), the Whole-of-Government Approach is “a new culture of collaboration and management, increased transparency and accountability” to generate “participation and responsiveness” between local and national agencies (United Nations, 2014, p. 81).

### Participation

Decentralization and interoperability between back offices can lead to important improvements in efficiency and effectiveness, collaborating central government functions with local offices. Furthermore, improving national and local offices participation to vision and strategies can improve service designs, expenditure management, and service delivery, as well (United Nations, 2008b). In fact, the willingness of eGovernment Whole-of-Government Approach is to fully include back offices, working for a unified purpose, to jointly participate in the quality of services. eGovernment is supposed to enhance communication and coordination between offices, empowering local offices and officials to participate in the making of national inquiries. It is the participation of local offices in national strategies for the improvement of governance and management, especially of complex glitches, that call for local experiences and considerations (United Nations, 2014). Sangita (2002b) sees that decentralized democratic approaches are able to promote participation of integrated offices in service delivery, efficiency, effectiveness and responsiveness. Decentralized governance is able to uphold an increased competition among layers of government for “local control over resources, increased decision making

authority, increased targeting of services to local needs and desires, and increased transparency for improving efficiency” (Sangita, 2002b, p. 339). According to Sangita (2002), participation and decentralized governance would rise horizontal accountability, effectiveness and responsiveness among institutions (Sangita, 2002b, p. 343). Indeed, a decentralized and participative management is a good manner to lower costs, as “decisions regarding selection of schemes and design of projects are taken in consultation with the various stakeholders in the organization”, especially between administrations that work under a WGA to preserve community properties and resources (Sangita, 2002b, p. 339).

### **Responsiveness**

Good Governance is a package of ethics, that must drive into good performance and responsiveness of public institutions within a reasonable timeframe (Misuraca, 2007). Responsiveness is defined as the way public institutions and processes serve all internal and external stakeholders on time (UNDP, 2007, p. 7) . Responsiveness of institutions could enhance the quality of services vis-à-vis citizens and businesses (United Nations, 2014). Indeed, the use of eGovernment at different layers of government could be effective and efficient to increase responsiveness among offices, “bringing closer coordination between the different levels of government organizations towards obtaining the Good Governance objectives” (Kettani & Moulin, 2014, p. 27). In other words, eGovernment Whole-of-Government Approach (WGA) can improve government responsiveness towards external and internal demands of public organizations. Furthermore, governance and decentralization reforms carried in the world, are supposed to encourage horizontal transparency and accountability between organizations to stimulate responsiveness of public institutions towards a “better client centric responsiveness externally and the corresponding need for new forms of coordination internally” (United Nations, 2008b, p. 90) . Actually, responsiveness of offices is contingent upon strengthened horizontal and vertical institutional mechanisms that can hold institutions and its officials accountable upon late services and goods. Hydén & Samuel (2011) see that responsiveness is a give-and-take process; “It is difficult to enhance responsiveness if there is no demand” (p.



255). Certainly, the delegation of national authorities to local offices is a way to increase responsiveness internally and externally towards urgent situations. Expenditure and financing responsibilities are delegated, lately, to local governments, in various countries, to strengthen local government responsiveness and accountability between offices (World Bank, 1992a, p. 20). To conclude, decentralizing initiatives is more fortified in the world for its manifest improvements to efficiency, effectiveness and responsiveness (Grindle, 2009, p. 5), participating in the making of a long strategic vision for good governance and development (UNDP, 2007, pp. 7–8).

### Strategic vision

Punyaratabandhu (2004) describes Good Governance as “the striving for rule of law, transparency, equity, effectiveness/efficiency, accountability, and strategic vision in the exercise of political, economic and administrative authority” (p. 3) . Strategic vision is a fundamental element among the UN ethics of Good Governance, for its input to harvest long-term strategies and visions. Truly explained by UNDP, economic and human development is depending on a collaborative governance between local and national, rural and urban interoperability for a long term successful programs of decision-making and service delivery, taking into consideration all “the historical, cultural and social complexities” that may exist between regions (UNDP, 2007, p. 8). In this direction, eGovernment Whole-of-Government Approach would rise consensus among governments “about how situations can be improved through drastic changes in policy” (UNDP, 2007, p. 9), to map collectively a big picture for good policy-making. Coordination between offices is supposed to solve delinquent issues across public administration (OECD, 2011b). eGovernment WGA is able to ensure a transparent strategic vision and planning for public policy making and service delivery through a “collective commitment” decided by “the whole range of actors” engaged in a chain of communication and collaboration (OECD, 2011b, pp. 43–44). Successfully, transparency and openness of the shared data would enhance communication among local and national units for a good vision and planning as confirmed by OECD:

Transparency and openness help to promote a shared sense of purpose, for stakeholders outside as well as inside the government. Clarity of communication within the administration is important, so that, for example, local governments can understand the vision and share in its construction and so that all parts of the public sector understand their role, responsibility and accountability for results. (OECD, 2011b, p. 44)

Heeks (2005) proves, also, that the proliferation of eGovernment initiatives are necessary for a joined-up synergism and coordination between public institutions to pencil a holistic vision of prosperity and sustainable development.

### **Administrative Simplification**

Administrative procedures and papers are a source of information, regulations and procedures that frame administrative requirements for citizens and governments. Then, too many papers, rules and procedures can hamper and burden administration. Most of eGovernment reports, carried out under the auspices of OECD, triggered the issue of administrative simplification as a necessary step towards Good Governance (Ladegaard et al., 2003; OECD, 2005, 2009, 2011b, 2011a, 2013). According to OECD (2009), administrative simplification reforms and strategies aim to reduce unnecessary burdens caused by complex bureaucracy and paperwork operations in order to cut red tape. Administrative simplification is currently a high prerequisite in the political and policy agendas of countries to influence Good Governance in administrative environments. Indeed, administrative simplification is a relevant issue to the front and back office operations because of its importance in cutting excessive regulation and redundant bureaucracies that may hinder administrative transactions towards governments or citizens. Red tape and complex administrative processes and intermediaries open the gate for corruption, bribery and unnecessary costs (Ladegaard et al., 2003; OECD, 2009, 2011b). However, “simple and transparent administrative procedures and effective communications can help achieve Good Governance” (Sangita, 2002b, p. 335). In fact, administrative red tape is merely a duplication of repeated paperwork and redundant tasks, which bottleneck administrative transactions and responsiveness. In this way, most of administrative reforms launched in



developing countries so far including Morocco called to integrate eGovernment as a necessary agenda to streamline administrative procedures and transactions through paperwork reduction; cutting red tape of unnecessary forms and workflows (OECD, 2009). Lately, Morocco focuses more on the notions of simplification and transparency in its administrative reforms to encourage development and investments in the country (Ben Osmane, 2004). The reforms covered Expenditure Management for its direct contact with investors and entrepreneurs. Indeed, the integration of GID is supposed to simplify and streamline budget calculations, making them more user-friendly between local and national offices in the country. The simplification of expenditure management in Morocco is driven by eGovernment mechanisms, consolidating national and local back offices together through the application of the GID<sup>22</sup> (Maroc Numeric, 2011). Expenditure reforms in Morocco aim to integrate ICTs to make the management of public budget more simplified, transparent, decentralized, streamlined and more responsible through ICTs. Mohamed Saad El Alaoui, director of Integrated System of Expenditure Management (GID) entity at TGR<sup>23</sup> in Morocco, has been interviewed about the objectives of the GID, by *Le Matin* newspaper. El Alaoui answered that the GID aims to reform and decentralize budget management in Morocco using ICTs in order to simplify transactions and procedures, reducing costs and time related to the execution of expenditure. Mr El Alaoui added that the proposed system should allow for better integration of public expenditure management authorizing officers, subordinates, budget directors, controllers and accountants of the General Treasury and the ministry of Finance to ensure the automation and monitoring of administrative budgetary transactions in a seamless coordination for Good Governance (Moha, 2009).

### Seamless Coordination

eGovernment has evolved and developed from a standard “online presence” to reach a “full integration”, seamlessness and interoperability between governments (Coursey & Norris, 2008). A seamless coordination is a fully-fledged state which is achieved, so far,

<sup>22</sup>[www.gid.gov.ma](http://www.gid.gov.ma)

<sup>23</sup>Trésorerie Générale du Royaume (Moroccan General Treasury).

when technological capacities are integrated in a WGA for a connected governance (United Nations, 2008b). At this stage, eGovernment succeeds to align multiple back ends for a simple, seamless and streamlined coordination between different back ends working on a single issue, in order to avoid leakage and blockage of workflows. The connected governance stage across administrative boundaries is a high standard of coordination and cooperation needed for governance attained by the eGovernment maturity (United Nations, 2014). Many theorists witness how eGovernment succeeds to transform back and front lines from separate systems (silos) into a unified re-engineered architecture, connecting various ministries, delegations, municipalities and provinces in a seamless integration so as to enable service deliveries through a single window (Barthwal, 2003; Coursey & Norris, 2008; Haque & Pathrannarakul, 2013; Heeks, 2005; Kettani & Moulin, 2014). eGovernment is supposed to rise communication and coordination, transactions of workflows more seamlessly, respecting deadlines of operations, in a cost-effective manner (OECD, 2011a). Olson et al. (2012), in their book *Coordination Theory and Collaboration Technology*, shed light on the various collaborative work groups and their use of technology for interconnection, coordination and cooperation among independent systems, individuals and organizations. The study is unique in the way it explores the manner in which people collaborate and coordinate decision making and workflows efficiently and productively in highly decentralized environments, due to the high degree of computation. The book establishes a better understanding for the roles of ICTs in restructuring decentralized organizations, industries, and markets for a sophisticated, secured and seamless coordination “made possible by the development of a seamless infrastructure” (Olson et al., 2012, p. 730). In summary, eGovernment wholeness strategy is a good enabler for “a transparent smart e-Governance with seamless access, secure and authentic flow of information crossing the interdepartmental barrier and providing a fair and unbiased service to the citizen” (Gupta & Bagga, 2008, p. 4).



### Data Information Security

Information security is an ongoing management of technical measures for the safety of the administrative data. Information security is not an end in itself but gained from the use of ICTs in the public sector (United Nations, 2003b). The joint use of e-applications in Whole-of-Government systems is doomed to open “access to government services anywhere at any time over open networks” (Wang, 2009, p. 483). Indeed, the rise of eGovernment has given birth to incorporate work supported by digital communities in the public sector. Therefore, a considerable volume of documentation circulate online between back offices in clouds. Land, police and budget records, for example, are critical data that need protection from unauthorized access. Henceforward, an “understanding of the information security technology and the need for its implementation is key for safer, secured and smooth functioning of e-governance undertaking” (Spewak & Hill, 1993, p. 120). Milner (2000) in his notable book *Managing Information and Knowledge in the Public Sector* defines information security as a package of “practices and procedures which ensure that information, generally held in electronic format, safeguarded from unauthorised access, modification or accidental change and is readily available to authorised users on request” (p. 28). These procedures, promised by eGovernment, are supposed to protect the shared systems and information against suspicious attacks or unwanted activities that may affect security; especially that governments comprise a vast shared volume of national and local data, which cannot be surveilled by one agency alone (Fan, Zhang, & Yen, 2013). Governments spend a lot of money to reform public administration, advancing electronic clouds, rather than archaic archives, as preferred spaces for storing confidential data, plans and transactions of different offices (United Nations, 1999). eGovernment cyber-security ,therefore, is a condition for institutional interoperability, especially after the 9/11 terrorist attacks on the United States (United Nations, 2008b, p. 77) . To sum up, eGovernment is impelled by a growing demand for Whole-of-Government strategy “to deliver natural disaster relief, provide information security, and become more people-centric in delivering services” (United Nations, 2016a, p. 18). Spontaneously, eGovernment interoperability must function under a solid rule of law that is able to protect officials, governments, data

and citizens as well (United Nations, 2008b).

### Rule of law

The rule of law is an important proviso in the making of Good Governance (Kaufmann & Kraay, 2007b; Kettani et al., 2009; UNDP, 1997a; United Nations, 1999, 2008b). Indeed, legal frameworks and procedures should be clear and fair enough to preserve human rights against “the arbitrary exercise of power in the public sector” (United Nations, 2008a, p. 45). The rule of law is perhaps the most interesting ethos in relationship to Good Governance, for its direct contribution to the welfare of humanity, especially the poor and the marginalized (Jain, 2012; Kettani et al., 2008; United Nations, 2008a, 2014). In the public administration, rules and procedures are made to combat the abuse of power, corruption and independence from politicians so as to reduce poverty, protect human rights and build free markets, within which economies can prosper (Hydén & Samuel, 2011; United Nations, 2008a). Certainly, Good Governance is “epitomized by predictable, open and enlightened policy making; a bureaucracy imbued with a professional ethos; an executive arm of government accountable for its actions; and a strong civil society participating in public affairs, and all behaving under the rule of law” (World Bank, 1994, p.7), Good Governance is achieved when laws and regulations are applied fairly. They are necessary for accountability, which “cannot be enforced without transparency and the rule of law” (Kettani & Moulin, 2014, p. 78). Subsequently, eGovernment has been introduced as a solution to enforce the rule of law, against corruption and misuse of political power, for an equal service delivery (Kettani et al., 2009). eGovernment is destined to rise citizen trust in their governments, by reducing intermediaries and corruption that may lead to unequal service delivery (Bhatnagar, 2004; Shah, 2007). Kettani & Moulin (2014) indicate in their study that laws and regulations, governing BEC service delivery, are applied objectively. Absolutely, the direct contact of citizens with the electronic kiosks in Fez has eliminated the need to bribe officials to receive an equal treatment in turn, especially that indicators of inequality, corruption in service delivery have been registered in the same municipalities, before the implementation of eGovernment. Broadly speaking, automating services at the



frontline of administration emphasizes respect for human rights, competition of markets, justice, equality, democracy and Good Governance (United Nations, 1999). Meanwhile, the rule of law can be preserved by eGovernment systems for the protection of officers' rights, security of data and organizations in back offices. Back office interoperability between government systems and services dictates a necessity for solid rules to protect users and shared data, that is a national treasure (Alshetewi et al., 2013). eGovernment whole-of-government frameworks define a package of rules and regulations to facilitate and encourage horizontal and vertical transactions, under an overall framework of ICT law, called eGovernment Interoperability Frameworks (Gottschalk & Solli-Saether, 2009). Each country develops its eGIF to regulate eGovernment interoperability towards citizens, businesses and governments, against any abuse. Indeed, eGIFs dictate a predetermined package of technical, semantic and organizational standards to protect officer's digital rights against any abuse of information systems including:

- Authentication and passwords.
- Content regulation and validation.
- Legal recognition of electronic signatures.
- Data privacy and security, encryption and officers rights.
- Electronic contracts formulation in electronic transactions.
- Electronic procurement and taxation inter-jurisdictional rules etc.

The Moroccan eGovernment Interoperability Framework<sup>24</sup> is launched in 2012 to finish the Moroccan Circular 9/2013 that calls public offices to stick to interoperability regulations, in their joint-up workflows. The organizational interoperability section in the Moroccan eGIF specifies norms and standards, in which all public administrations should partake through eGovernment WGA (Direction de l'Economie Numérique, 2012, p. 10). Most of eGIF rules and regulations, in the world, address issues of fragmentation, confidentiality, integrity and

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<sup>24</sup>In Morocco, it is labeled as Le Cadre Général d'Interopérabilité in French, the framework is downloadable on: [www.egov.ma](http://www.egov.ma)

availability of data concerning joined-up offices. To sup up, eGIFs rules are similar to road codes. They supervise eGovernment transactions to protect national data, officers, citizens and businesses against any digital abuse or fragmentation.

## 2.9 Summary

eGovernment Whole-of-Government technology has become an important necessity to reform the public sector in Morocco. The literature review synthesizes most of the elements and conditions, related to the federation of public agencies, looking for ways to become more efficient and effective, through ICTs. The review of literature represents the eGovernment Whole-of-Government Approach as a new solution to cut red all the devil omens, related to bad governance, maintained in single-purpose management between offices. Literature review tries to explore and comprehend, first, the importance of public administration, as a pivotal element, in sustainable human and economic development, by putting citizens at the heart of service delivery. Through the history of the Moroccan public administration, the author tries to give some pinches from the endeavours of Morocco towards governance and public sector reforms. The chapter also overviews what the diverse group of scholars and international stakeholders have produced and reviewed about the eGovernment effect on Good Governance ethics in front and back offices, trying to tackle all the different forms and evolution stages of eGovernment reached, so far, about Morocco. The researcher stirs a rich controversy about the strengths of the Whole-of-Government approaches and the failures of the silo-based ones, through all the success stories in the world, including recent ones in Morocco. The chapter has successfully put together a group of peer-reviewed articles and books, which address the roles of eGovernment technologies and their attempt to reform the public sector in general and the Moroccan public sector in particular. The reviewed literature melds together the theory of coordination between offices and its practical effect on the new values of Good Governance in back office deliveries. Step-by-step, the following chapter describes electronic interoperability and integration as key analytic moves of Good Governance,



illuminating with experiences from the Moroccan context. The review of this dissertation uncovers the relative lack of research dedicated to G<sub>2</sub>G operations, in terms of concepts, definitions and perceptions of governance conception, since the beginning of history, and the efforts of the international aid donors intervention for its maintenance. The chapter concludes with the identification of governance indicators, which ought to be maintained by electronic interoperability and integration between offices (G<sub>2</sub>G). Finally, the coming chapter illustrates the research approach and strategy for the exploration and the validation of these indicators.

**T**his study aims to investigate the influence of the eGovernment Whole-of-Government Approach on Good Governance, taking the Integrated System of Expenditure Management (GID) as a case of study, in Morocco. In other words, the study aims to examine the endeavors of eGovernment WGA to unite public administrations for Good Governance. More specifically, it looks at the way electronic integration and interoperability can promote the wicked ethics of governance and management among different offices and organizations. Therefore, the major purpose of this chapter is to design the appropriate methodology and procedures, research design, variables, population, research instrument, validity and reliability to reach better findings for the following research questions and hypotheses.

### 3.1 Research Questions and Hypotheses

#### Research Questions

- **Qualitative Research Questions:**

1. How can the eGovernment Whole-of-Government Approach (eGovWGA) reform governance in the Moroccan Public Sector?
2. To what extent can the silo-based approach hinder Good Governance in the Moroccan public sector?

- **Quantitative Research Questions:**

3. Is there any effect of eGovernment Whole-of-Government Approach (eGovWGA) on Good

Governance in the Moroccan Public Sector?

4. Is there any influence between the values of Good Governance under the effect of eGovernment Whole-of-Government Approach (eGovWGA) in the Moroccan Public Sector?

5. What variables exhibit high importance and low performance in the construction of Good Governance, worth to be improved by managers?

• **Mixed Methods Question:**

6. Is there any relationship between the de jure documentation and de facto outcomes of eGovernment Whole-of-Government Approach on Good Governance in Morocco?

### Research Hypotheses

H<sub>1</sub>: eGovernment Whole-of-Government Approach has a positive effect on Good Governance.

H<sub>2</sub>: There is an influence between the values of Good Governance under the effect of the eGovernment Whole-of-Government Approach (eGovWGA) in the Moroccan Public Sector.

H<sub>3</sub>: There is no variable to focus on for managerial actions in the construction of Good Governance.

## 3.2 Research Design

Research methodology is a kind of activity, where the researcher reflects upon the method used for the research problem. Mixed methods are now widely used in social and human sciences. Mixed method designs look to combine and integrate both qualitative and quantitative research data that are collected in two different phases to capture the detailed trends of the research problem. When integrated together, both methods could complement each other seamlessly for a more complete picture and analysis. Indeed, method triangulation is the better design to seek conjunction and corroboration through qualitative and quantitative data collection, sequentially or congruently (Hesse-Biber, 2010). It is the use of more than one method to look at the same research question in order to enhance credibility, validity and complementarity of the research findings. Indeed, John Creswell is an international substantial reference in mixed methods who advises the use of mixed method. Creswell (2014) encourages students and researchers for a different data

collection to provide a whole “understanding of a research problem than either quantitative or qualitative data alone” (p. 48). Absolutely, many researchers have seized the powers and synergies of this approach for the complementarity in its approach. Indeed, qualitative data analysis offers an in-depth investigation to quantitative findings, or vice versa, according to researchers willingness either to explain or explore themes and subthemes of their research questions (Hesse-Biber, 2010). As a matter of fact, Creswell (2014) underlines three basic designs for mixed methods research: convergent, explanatory sequential and exploratory sequential, in his substantial reference: *Research Design: Quantitative, Qualitative and Mixed methods Approaches*. In mixed methods, quantitative and qualitative data is collected either congruently or sequentially beginning with qualitative or quantitative data collection, according to the explanatory or exploratory design. In explanatory sequential designs, the investigator aims to explain a certain phenomenon by numeric data at the first phase, where qualitative data analysis comes at the second sequence to explain in more details the initial quantitative results. However, the exploratory design is a reversed sequential method, which begins by the exploration of the phenomenon through qualitative data analysis to end up with quantitative findings to reject or confirm the hypotheses. Indeed, the researcher employs qualitative data analysis to design an appropriate instrument to test qualitative exploratory results (Creswell, 2014). Therefore, the mixed method is a distinct approach to social and behavioral sciences, which integrate both qualitative (open-ended) and quantitative (closed-ended) data collection to explain or explore the inquiry of the research questions or hypotheses in this approach. The current study is a purely sequential exploratory mixed methods design, which is collecting and mixing up qualitative and quantitative data, at some stage, in order to explore the researched phenomenon.

### 3.2.1 Rationales for Using the Exploratory Sequential Design

Explanatory research designs begin with qualitative analysis and end up with qualitative explanation for research questions (QUAN + qual = explanation). However, the current study uses a sequential exploratory design for instrument development (qual +

QUAN = exploration). The first phase of this research includes qualitative data analysis (documentation analysis and focus groups), where the second phase includes instrument development (questionnaire) and quantitative data analysis (Creswell & Clark, 2011). There are different reasons why this research chooses for a mixed methods approach, using an exploratory sequential design. First, this research dives deeply into the exploration of a new field of research so as to construct a valid instrument, since no questionnaire is created before. Second the researcher aims to compare the *de jure* existing official documentation and the *de facto* realities of the phenomenon. The study aims to generalize qualitative findings, taken from few individuals, at the first phase into a large sample gathered during the second phase all over the kingdom. In fact, the first results of public document analysis and focus groups will help to design a convenient quantitative method (survey) at the second phase for more exploration and research. This design is based on the evidence that exploration is needed here to:

1. To discover and explore the phenomenon.
2. To design an effective new instrument for measuring and evaluating eGovernment Whole-of-Government systems and Good Governance variables between governments (G<sub>2</sub>G), which is not available so far.
3. To corroborate and limit independent (eGovernment Whole-of-Government Approach) and dependent variables (Good Governance).
4. To design a pilot instrument for measuring Good Governance in back offices (G<sub>2</sub>G).

The type of the mixed method, opted for in this research, aims to triangulate methods to look at the research questions from different angles. The qualitative analysis of public documents about the system GID will proceed for theme and variable extraction and series of focus groups will explore more in-depth the items of the discovered themes. This part will help also to answer qualitative questions and design the appropriate instrumentation for the quantitative phase. The model is used when the researcher develops research hypotheses and questions based on the qualitative procedures (Creswell & Clark, 2011). In this regard, the first phase of data collection will explore the topic, extract themes, and

variables for a valid and reliable instrument, generalizable into a group of participants at the quantitative phase (Creswell, 2014).

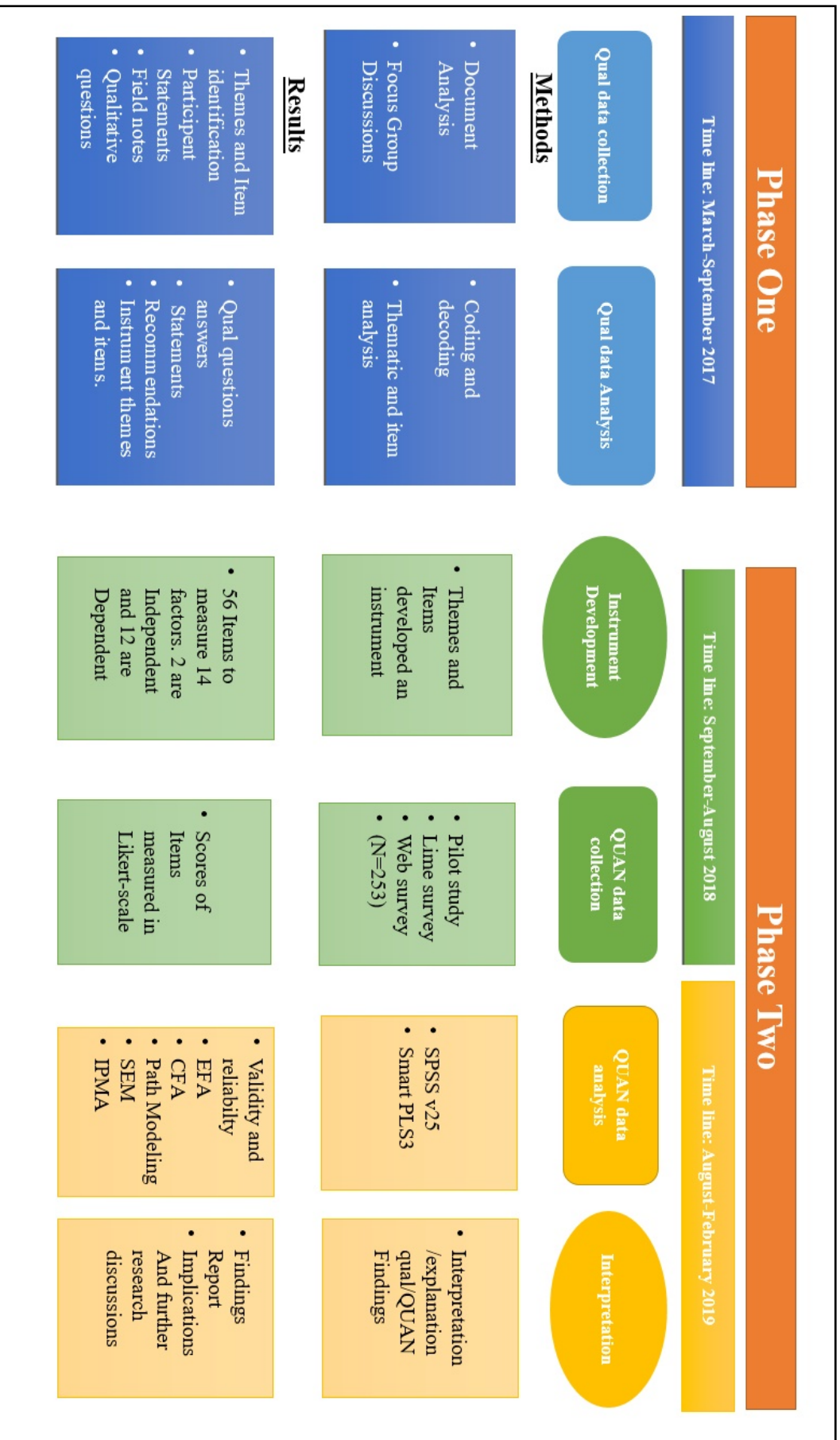


Figure 3.1: Research phases

### 3.3 Strengths and Challenges of Exploratory Designs

The fact that the sequential exploratory design builds on two separate sequences to collect qualitative and quantitative data, makes it a clear and straightforward design for researchers to describe their findings and report them. Creswell (2014) suggests that the exploratory design is a pertinent method to look at emergent theories resulting from literature review and qualitative analysis. Exploratory designs can also be used to generalize qualitative findings into new samples of the population to explore widely a phenomenon. Actually, exploratory designs are more advantageous for researchers to build a new instrument to test a new theory, the case of this research. In addition, this model could make a largely qualitative data analysis more clearly forthright, when reduced into isolated themes and items of instrumentation to be tested sequentially at the quantitative phase. Creswell (2014) adds that exploratory studies can have also some drawbacks as well, as it asks for a long period of time to complete necessary data collection for both phases. Moreover, the researcher may find it difficult to prove the credibility and validity of the instrument, built at the qualitative phase. In fact, researchers should carefully draw manageable logic themes, matching their research problem, to construct valid questionnaires.

### 3.4 Trustworthiness and Authenticity

Trustworthiness and authenticity in qualitative research refer to the process of reliability and validity, which is common in quantitative data collection as well. Trustworthiness is an important process in methodology, in which all the steps of data collection and analysis are authentically explained. According to Kumar (2010), trustworthiness is assumed by the researcher, when the findings are credible, transferable, confirmable and dependable. In this research, credibility or internal validity will be insured by focus group discussions when the results of documents analysis will be confirmed as credible and logic from the perspective of the GID users. Triangulation of data collection is



a good process to ensure internal validity and credibility (Creswell, 2014; Kumar, 2010; Tracy, 2012). Transferability or “internal validity” is the second criteria to ensure trustworthiness in the qualitative phase. It is a process in which the research findings can be generalized or transferred to other contexts (Kumar, 2010, p. 185). Reliability and transformability of the study must contribute automatically to the dependability and consistency of its findings. The study can be dependable when the research findings are reused again by other researchers and obtain the same results. However, confirmability of research is the way in which the findings are confirmed and corroborated by the participants. Interviews and focus groups, for example, are confirmatory processes for the objectivity of the findings in exploratory designs. Actually, the confirmability of the study is an ongoing process that is linked to the practical position of participants who confirm or reject the themes and the factors of the philosophical position of the theory and literature. In this direction, Creswell (2014) recommends triangulation of methods and data collection for the corroboration of research themes. In this way, researchers could check their findings with participants to decide if they are valid and reliable. “Member checking”, for example, is also another technique to discuss the findings along with the participants at the qualitative phase for the accuracy and the pertinence of the recorded themes and their interpretation. Creswell (2014) continues that “external auditors” may be consulted, as well, to review the research findings for accuracy and validity of the instrument, themes and findings. External auditors may be experts in the field who can provide a perfect feedback on the evolving themes and interpretations. To sum up, the qualitative phase is important in research to check for consistent patterns of theme development among several investigators on a team for trustworthiness, accuracy and authenticity of the findings (pp. 251–252).

### 3.5 Induction and Deduction Reasoning

Inductive reasoning begins with phenomenon observation and conceptualization, theme construction in order to induct a theory at the end of the process. Tracy (2012) sees that inductive reasoning is a way that uses qualitative data (specific details) in order to

build the theory (the general). Conversely, deductive reasoning begins by theory (general) to reach a hypothesis (specific). The researcher at this phase test the theory and asks the question: what could happen if certain circumstances are available between variables to confirm or disconfirm the hypothesis (O’Leary, 2014). According to Creswell (2014), qualitative designs aim to introduce inductive theories while quantitative approaches look to verify and test theories for deductive conclusions. The researcher could have established a comprehensive set of themes into units of constructs and variables for corroboration, looking back and forth at theme construction and literature till a saturation point is achieved. O’Leary (2014) in her excellent book: *The Essential Guide to Doing Research* clearly mentions how to conduct inductive/deductive reasoning, saying:

You may design your study so that theory can emerge through inductive processes, but as those theories begin to emerge from the data, it is likely that you will move towards a process of confirmation. In this case, theory generation depends on progressive verification. On the other hand, the credibility of those testing hypotheses through deductive verification can depend on their willingness to acknowledge the unexpected. Researchers need to be able to inductively generate alternate explanations. (pp. 195–196)

In this direction, mixed methodologies most of times are qualitative/inductive and quantitative/deductive or vice-versa, according to research design sequences: exploratory or explanatory. Cameron (2016) prefers to use inductive/deductive reasoning at mixed methods, because they offer a different examination to research problems, especially when they are well-explained by inquirers. Cameron (2016) continues that using the approaches together can produce “results that engage scholarly conversations across disciplines as well as speak to policymakers” about the discovered or uncovered new theories (p.11). A mixed method is an inductive and deductive investigation to the same study. Indeed, it incorporates both sequential and concurrent thematic data collections for analysis from different perspectives. Sequential designs triangulate inductive and deductive approaches to “discover” and “uncover” reasoning for thematic meaningful understandings (O’Leary, 2014, p. 195). In this way, qualitative and quantitative sequences are embedded together for the transformability of research (O’Leary, 2014). Likewise, this research moves between inductive theory generation and deductive theory and hypothesis testing and verification.

The researcher inductively works to generate his theory from the existing literature for a deductive verification at the quantitative phase, in order to confirm or disconfirm the theory. (O’Leary, 2014, p. 196).

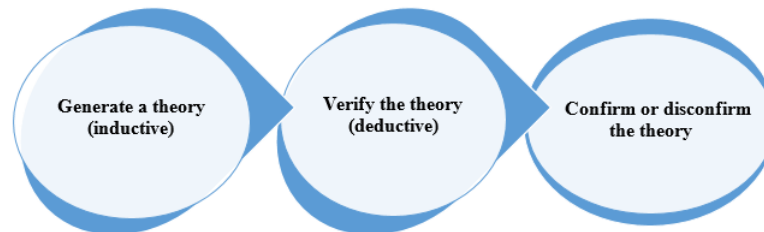


Figure 3.2: Inductive-deductive reasoning

In other words, the researcher opts for an inductive/deductive reasoning , as indicated in figure 3.2 to discover the themes, variables and theory through triangulated processes of qualitative analysis. When the themes and variables look clearly constructed, the researcher will be able to build his instrument for a deductive verification of the constructed theory and hypotheses.

### 3.6 Research Population and Sampling

The exploratory design research method is a two-phase sequential procedure by which the researcher commences exploring the subject qualitatively. The quantitative phase is a second step where the developed instrument is generalized into a larger sample of the population (Creswell, 2014; Kumar, 2010). Likewise, the researcher aims to test qualitative exploratory findings that are developed about the system GID and its endeavors to promote Good Governance among the Moroccan public administrations. The following study explores sequentially a convenient instrument to measure the effect of the GID system (eGovernment WGA) on Good Governance. The instrumentation is generalized to a larger population (GID users) in the Moroccan public sector, at the second sequence of this research. Therefore, both sequence populations are presented in this chapter.

### 3.7 Participants and Sampling in the Qualitative Phase

The qualitative phase is an important step to explore the themes of the study for more investigation and assessment at the quantitative analysis. Themes and items were purposefully developed out of available public documents for further analysis in focus groups. Comments, themes, items and quotes about the system GID were introduced into a group of six expert members, who are chosen non-randomly, because of their convenience, availability and willingness to participate in the focus group sessions. Random sampling cannot be used at this phase, simply because “it is not desired and often not possible for a range of reasons in qualitative research” (Hennink, 2007, p. 94). Indeed, the researcher chooses “convenience sampling method” to select carefully the focus group participants, based on the following criteria:

1. Participants who are willing to participate in focus group sessions.
2. Available participants who can attend sessions of focus groups separately.
3. GID-savvy participants who would best use the system in their offices.
4. Participants with rich information about the GID system who can best answer and discuss the inquiries of research questions.
5. Participants from both genders with different years of experience.

The chosen participants are effectively users of the GID system in different administrations at the neighboring provinces as indicated in table 3.1. The same participants fill their questionnaires at the quantitative phase, as well.

**Table 3.1: Focus group participants**

Participants	Gender	Position	Profession	Discipline
Mohammed Oudie	Male	General Treasury in Kenetra	Administrator	Master Degree in Economics
Abdellah	Male	Ifrane Province	Engineer	Engineering in ICTs
Abderrahim	Male	Health Delegation in Ifrane	Technicien	ESTA
Abdmoughit	Male	El Hajeb Province	Administrator	Master Degree in Law
Soukaina	Female	Financial Auditor	Executive	Economics and Finance
		Ministry of Interior Rabat	Engineer	Agro alimentary



The participants are informed that focus group sessions will occur twice in mutually agreed locations at mutually convenient times. Confirmation of time and location with the participants is informed by phone. Also, the participants are reminded that the focus groups would be transcribed on papers, and provided to the participants for review, till we reach saturation in discussions. The researcher made sure that all themes, items, questions and descriptions are transcribed and respondents are given all the chances to review and correct the content. The process of *member checking*<sup>1</sup> is basically a good technique for participants to check, approve or disapprove interpretations on the themes collected from public documents about the utilities of the system GID and its initiative to enhance Good Governance among the public administrations, to which all the participants belong. Two external auditors, out of focus groups, are consulted about the findings to see whether the data analysis is congruent with the participants' descriptions. The auditors are contacted in their offices for the accuracy of the findings, descriptions, themes and items. The first auditor works as the head of GID system bureau at the Moroccan General Treasury in Rabat, where the second auditor is an expert of the GID system as well. He contributed to the making of this integrated system in coordination with the Moroccan General Treasury.

### 3.8 Participants and Sampling in the Quantitative Phase

Creswell (2014) recommends “random sampling” as an appropriate method in quantitative research for selecting participants, in which “each individual has an equal probability of being selected from the population, ensuring that the sample will be representative of the population” (p. 204). The researcher chooses randomization to generalize a representative population. Furthermore, the inferential kind of the study requires random sampling, so as to increase representativeness of data and population (Creswell, 2008; Kumar, 2010). Random sampling method is mostly popular in quantitative rather than qualitative data collection that needs an in-depth analysis reporting (Tracy, 2012). In the quantitative phase, the instrument is generalized to a wide population,

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<sup>1</sup>Member checking is a qualitative good technique to establish credibility and trustworthiness of the study, especially when trying to understand deeply a complex phenomenon by offering the participants a chance to confirm or deny the researcher interpretations.

representative to users of the system GID in the Moroccan public sector. The integrated system of expenditure management (GID) allows for a joined public expenditure management between national and regional governmental treasurers in coordination with ministries and their local delegations, municipalities and provinces. There is, at least, one employee, beyond the screen working with the system GID, at the offices of budget execution. The instrument questionnaire is delivered to the neighboring treasuries, delegations, municipalities and provinces at the region Fes-Meknes. The researcher aims to generalize his instrument to cover all the public administrations in the country; therefore, the link of the questionnaire is emailed to the users of GID system through their ministries and delegated offices, since all managers and employees have access to internet by virtue of their working conditions. In fact, the researcher self-administered formal letters and CDs of the questionnaire links to the following ministries<sup>2</sup>, along with the General Treasury of the Kingdom, in Rabat:

#### Visited Ministries

1. Ministry of Interior.
2. Ministry of Foreign Affairs and International Cooperation.
3. Ministry of Justice.
4. Ministry of Economy & Finance.
5. Ministry of Agriculture, Sea Fishery, Rural Development, Water Bodies & Forests.
6. Ministry of Urbanism, National Land Settlement, Housing & Policy of the City.
7. Ministry of National Education, Vocational Training, Higher Education & Scientific Research.
8. Ministry of Industry, Trade, Investment & Digital Economy.
9. Ministry of Equipment, Transport, Logistics & Water.
10. Ministry of Health.
11. Ministry of Energy, Mines, Water & Sustainable Development.
12. Ministry of Tourism, Air Transport, Craft & Social Economy.
13. Ministry of Youth & Sports.

<sup>2</sup>Receipt copies of the letters are joined in the appendices.



14. Ministry of Culture & Communication.
15. Ministry of Solidarity, Equality, Family & Social Development.
16. Ministry of Employment & Professional Insertion.
17. Ministry of Public Services and Reform of the Administration.
18. Ministry of Relations with Parliament & Civil Society.
19. Ministry of Agriculture, Rural Development, Water and Forest.
20. General Treasury of the Kingdom.

The researcher asked kindly the mentioned ministers to forward the questionnaire link to the GID users, working under their hierarchy. Effectively, few ministries rejected my request, claiming that the link is insecure to be delivered throughout their database, where some others did. Rapid responses were filtered into an excel response sheet, hosted in my Gmail account. Correspondingly, I emailed the questionnaire link to all the Moroccan treasurers, whose emails are available on the General Treasury's portal: [www.tgr.gov.ma](http://www.tgr.gov.ma). Approximately, (30 %) of the emailed population answered my questionnaire with a total of 253 GID users working at different administrations in Morocco. Background information about the participants is further defined in the quantitative phase.

### 3.9 Instrumentation and Variables

The designed instrument is identified in the qualitative phase, using the French language. A Likert scale survey is chosen for its trustworthiness and straightforwardness to assess a pool of attitudinal factors and items, developed based on the focus group discussions and literature (Hennink, 2007). The survey instrument includes a brief welcoming message and its closing instructions. The survey asks the participants about the level of their agreement on each statement item, using a five-point Likert scale, with higher values indicating high levels of their agreement on the items. The scale is anchored as: 5 for *strongly agree*, 4 for *agree*, 3 for *neutral*, 2 for *disagree*, and 1 for *strongly disagree* in order to measure 56 ordinal items of 14 factors. 12 of them are ethics of Good Governance, deemed

to be increased by the two factors: electronic interoperability and integration of the GID system. The ordinal items are tested for alpha reliability in a pilot survey, which is delivered to 30 participants. Therefore, low-performing items (correlation  $<0.5$ ) were eliminated and replaced. Therefore, the final version of the survey items drew on the pilot study, focus group solid discussions, literature review and external auditing of the GID experts. In fact, internal validity is not related to the characteristics of the participants, but to “changes in the measuring instrument or measurement procedures over time” to make the instrument more valid and reliable (Marczyk, DeMatteo, & Festinger, 2005, p. 163). The instrument follows the design of Good Governance Report Card prepared by The Urban Governance Initiative (TUGI), a UNDP project in Asia. The researcher has adopted the design of the United Nations questionnaire sample to measure urban governance, simply because it is similar to the present study in which the concept of *Good Governance* is made out of different attributing variables or constructs. According to the literature review, Good Governance is defined according to the field in which it is measured: Urban governance is different from water governance or administrative governance, for example. Therefore, the constructs and items of measurement differ accordingly from a study to another. However, the Likert scale is a very common tool in social science research. It composes item statements anchored from *strongly disagree* to *strongly agree*, where respondents have choices to indicate their extent of agreement or disagreement on a ranging scale. Likert scale “is based upon the assumption that each statement/item on the scale has equal attitudinal “value”, “importance” or “weight” in terms of reflecting attitude towards the issue in question”(Kumar, 2010, p. 389). It is a summated scale in which the total score is collected out of the attributing values of each item, selected by respondents. Indeed, Likert items allow for flexible responses ranging from three to nine scales, in comparison to the binary items, in which respondents are forced to choose *yes* or *no* answers. Likert scale is a Likert’s summative scaling approach in which researchers scale overall constructs through summation of individual item scores (Larson-Hall, 2010). In this regard, the research explores twelve core constructs to measure the concept of *Good Governance*, under the effect of electronic interoperability and integration in public administration (See

Appendices). The items of each construct are formulated positively rather than negatively, allowing the respondents to evaluate each item statement equally and correctly. The following section describes the scale and item development for the instrumentation in details.

### 3.9.1 Instrumentation

#### Section 1: Demographic information

The first section of the questionnaire is designed to receive a background information about the participants: age, gender, academic level, profession, administration and regions they belong too. Such information would help the researcher to collect only some descriptive statistics about the respondents, not for measurement.

#### Section 2: Good Governance

The first section of the questionnaire composes of 12 factors of Good Governance, measured by 48 items in total. Each factor of Good Governance is measured by 4 items. The totality of the twelve factors score the dependent variable: Good Governance in this survey. This scales investigate the users' attitudes on the system GID and its powers to increase Good Governance among public expenditure stakeholders.

#### Scale 1: Decentralization

This scale composes four attitudinal items (D1, D2, D3 and D4), that measure decentralization of workflows under the implementation of electronic integration and interoperability of the GID system. The items investigate the power of the integrated system GID to regionalize and self-rule the management of public expenditure all over the country.

**Scale 2: Efficiency and Effectiveness**

This scale composes four attitudinal items (EE1, EE2, EE3 and EE4), that measure the GID powers to increase productivity efficiency and effectiveness in expenditure management, under the effect of interoperability and integration of workflows in public administration.

**Scale 3: Cost-efficiency**

This scale composes four attitudinal items (CE1, CE2, CE3 and CE4), that measure the GID powers to generate cost savings on the level of correspondence and human resources under the effect of eGovernment Whole-of-Government Approach.

**Scale 4: Transparency**

The scale of transparency is composed of four attitudinal items (T1, T2, T3 and T4) , which assess the GID capacities to increase openness and clarity of expenditure management between local and national offices, always under the effect of eGovernment Whole-of-Government Approach.

**Scale 5: Accountability**

The following scale comprises four attitudinal items (A1, A2, A3 and A4), that measure the GID powers to increase vertical and horizontal accountability between public officers, in which each administration and employee is held accountable, in case of irresponsibility and litigation.

**Scale 6: Participation**

The following scale comprises four attitudinal items (P1, P2, P3 and P4), that measure the GID powers to increase the participation of all public expenditure stakeholders in the quality of services and national fiscal decision-making, always under the effect of electronic interoperability and integration.

**Scale 7: Responsiveness**

The following scale comprises four attitudinal items (R1, R2, R3 and R4), which measure the ability of the system GID to decrease fragmentations and increase rapidity and reactivity in budget management among stakeholders within a reasonable timeframe.

**Scale 8: Strategic Vision**

The four attitudinal items (S1, S2, S3, and S4) of strategic vision measure the GID powers to generate unified strategies of modernization, economic and social development, as an integrated system among different stakeholders, through a rationalized public expenditure management.

**Scale 9: Administrative Simplification**

The following scale comprises four attitudinal items (AS1, AS2, AS3 and AS4), that evaluate the system GID powers to simplify procedures and transitions, reducing red-tape and duplication of workflows among public expenditure stakeholders.

**Scale 10: Seamless Coordination**

The following scale comprises four attitudinal items (SC1, SC2, SC3 and SC4) to evaluate the GID and its digital abilities to streamline coordination of workflows between stakeholders without blockage and fragmentation for a rapid execution of public expenditure.

**Scale 11: Data Information Security**

The following scale comprises four attitudinal items (DIS1, DIS2, DIS3 and DIS4) to measure the GID and its digital powers to protect data and information from any kind of piracy.

**Scale 12: Rule of Law**

The following scale comprises four attitudinal items (RL1, RL2, RL3 and RL4) to measure the GID powers to limit the abuse of powers, influencing respect of administrative laws and regulations, fostering equity and objectivity in budget management among users.

### Section 3: eGovernment Whole-of-Government Approach

The second section of the questionnaire contains two factors of eGovernment Whole-of-Government Approach, measured by eight items in total. Each factor of eGovernment WGA is measured by four items in total. The totality of these factors will score the independent variable: eGovernment WGA in this survey. This scales investigate the users' attitudes on the system GID and its powers to increase electronic integration and interoperability among offices for a holistic management of public expenditure in Morocco.

#### Scale 13: Electronic Integration

The following scale comprises four attitudinal items (Eteg1, Eteg2, Eteg 3 Eteg 4) to measure the GID powers to integrate and join up offices, increasing collaboration and synergy for a Whole-of-Government management of public expenditure in Morocco.

#### Scale 14: Electronic Interoperability

The following scale comprises four attitudinal items (Eter1, Eter2, Eter 3 Eter 4) to measure the GID powers to increase semantic, syntactic and organizational interoperability among the users for an efficient Whole-of-Government management between the different stakeholders.

## 3.10 Variables

According to the research questions and hypotheses, this exploratory study looks to investigate the effect of the eGovernment Whole-of-Government on Good Governance among public budget offices in Morocco. All the variables are ordinal, measured in a Five-Likert scale following the design of Good Governance Report Card survey of the United Nations. The variables of the study are presented in the following tables 3.2 and 3.3.

### 3.10.1 Dependent Variables



Table 3.2: Dependent variables

Constructs	Items	Scale
Decentralization	Median $\sum$ (D1, D2, D3, D4)	Five-Likert scale
Efficiency & Effectiveness	Median $\sum$ (EE1, EE2, EE3, EE4)	Five-Likert scale
Cost Effectiveness	Median $\sum$ (CE1, CE2, CE3, CE4)	Five-Likert scale
Transparency	Median $\sum$ (T1, T2, T3, T4)	Five-Likert scale
Accountability	Median $\sum$ (A1, A2, A3, A4)	Five-Likert scale
Participation	Median $\sum$ (P1, P2, P3, P4)	Five-Likert scale
Responsiveness	Median $\sum$ (R1, R2, R3, R4)	Five-Likert scale
Strategic Vision	Median $\sum$ (SV1, SV2, SV3, SV4)	Five-Likert scale
Administrative Simplification	Median $\sum$ (AS1, AS2, AS3, AS4)	Five-Likert scale
Seamless Coordination	Median $\sum$ (SC1, SC2, SC3, SC4)	Five-Likert scale
Data Information Security	Median $\sum$ (DIS1, DIS2, DIS3, DIS4)	Five-Likert scale
Rule of Law	Median $\sum$ (RL1, RL2, RL3, RL4)	Five-Likert scale

The overall scale score of each construct is a summation of its individual item scores shown in the table, and Median  $\sum$  of (Construct1... , construct 12) = Good Governance.

### 3.10.2 Independent Variables

Table 3.3: Independent variables

Constructs	Items	Scale
eIntegration	Median $\sum$ (Eteg1, Eteg2, Eteg 3, Eteg 4)	Five-Likert scale
eInteroperability	Median $\sum$ (Eter1, Eter2, Eter 3, Eter 4)	Five-Likert scale

The overall scale score of each construct is a summation of its individual item scores shown in the table, and Median  $\sum$  (Constructs13 and 14) = eGovernment WGA. The researcher calculated the Median of the construct on SPSS V25, and not the Means simply because we have ordinal variables.

## 3.11 Pilot Study

The pilot study is a pre-testing technique to design a valid and reliable research instrument. It is conducted to check if the questions capture the research questions and objectives. The pilot study is an important step to test the constructs and items reliability

and understandability. The self-administration of the questionnaire in the surrounding administrations enabled the researcher to revise its constructs and items for user-friendliness. Indeed, the respondents, while filling the questionnaire in their offices, asked the question: what do you mean by *Comptable* in (French)? which is Accountant in (English). The public agents, labeled as *Comptable* do work under the ministry of finance and they are in charge of controlling (controllers) public expenditure operations in Morocco. In fact, the word *Comptable* was not clear for *authorizing officers* or *sub-authorizing officers*, who are accountants in their profession, but not controllers of the budget, which is true. The item *Comptable* in the survey is replaced by item *Contrôleur*<sup>3</sup>. Also, the researcher discovered during the pilot study that item DIS4: *The system GID can protect and maintain your electronic signature against any type of electronic piracy* was unclear for respondents. Documents analysis and focus group discussions revealed that electronic signature is an available option on the GID platform. It allows for a secure online document transaction, and any change on the signed document is detectable by the strong authentication of all the users into the system. However, the item is interpreted as an (e-signature) rather than the cryptographic protection of online document transaction, in which GID adds automatically the full name of the logged-in user. Only integrated parties in the system are allowed to encrypt the online transactions, using their authentication log in. As a result, the researcher deleted the item and replaced by DIS4: *The encryption process of GID system guarantees a discreet decryption of messages and data between the integrated offices* on the survey. The statement item is now made more clear and comprehensible to respondents on the final version of the questionnaire. Accordingly, most of the respondents' comments, at this stage, are reasonable. They contributed positively to the rewording of the questionnaire to suit the researched case study, in concordance with the Moroccan administrative context, measuring what should be measured for validity and reliability conditions (Kumar, 2010).

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<sup>3</sup>Controller of public expenditure.

## 3.12 Validity and Reliability

Validity and reliability is an interwoven process in mixed method designs. The process becomes more complex in exploratory designs when the researcher is asked to embroider a steady input for instrumentation in the qualitative phase (Teddlie & Tashakkori, 2008) . Indeed, any mistake in the collection of information, data processing, statistical procedures could imperil the accuracy and quality of research. In sequential exploratory designs, trustworthiness and authenticity of qualitative findings must contribute automatically to the validity of quantitative findings, in which “the empirical measure adequately reflects the real meaning of the concept under consideration” (Kumar, 2010, p. 178). Therefore, the concept of validity is more concerned with the consistency of the constructs, items and variables of the instrument, constructed to measure what should be measured. According to Kumar (2010), the instrument is measuring what it is supposed to, when there is a logical link between the item questions and the objective of the instrument. Obviously, validity is a three-dimensional process, which should be validated on three levels: content, criterion and construct. Content validity looks whether the instrument measures the construct being measured. However, criterion validity is defined by predictive validity, reflected by “the degree to which an instrument can forecast an outcome” (Kumar, 2010, p. 180). On the other hand, concurrent validity is the way the constructed instrument can be able to be generalized to other contexts and studies (Creswell, 2008; Hesse-Biber, 2010). The literature review and public documents analysis have developed real items that reflect real constructs. Ambiguous items, feared to underload to their constructs, were eliminated and replaced during the pilot study. The instrumentation content is relative and valid to the measurement according to the focus group participants as discussions reached saturation. To sum up, validity is given an enormous care in this study so that the study answers all the research questions in this dissertation.

While validity checks with external consistency of the instrument, reliability checks the internal consistency of the scale (Creswell, 2014). Reliability refers to the way scores, obtained from an instrument, are reliable because they are stable and consistent over time.

Scores should remain consistent when the instrument is administered several times. Internal validity of the instrument could be threatened by the ambiguity of the constructs or the tiredness of the respondents. Henceforward, the administration of the questionnaire ought to consider the well-being of the participants.

According to Larson-Hall (2010), there are more than several ways to examine the instrument reliability, but Cronbach's Alpha is mostly used . It measures inter-item consistency, calculating "the ratio of variability attributable to subjects divided by the variability attributed to the intersection between subjects and items" (p. 391). However, the research checks upon the internal consistency reliability of the questionnaire, using both Cronbach's Alpha and Composite Reliability (CR) in order to increase the trustworthiness of the scale.

### 3.13 Data Collection Techniques

Data is collected sequentially at two different phases, in this research. At the qualitative phase, document analysis and focus groups will be triangulated for theme and scale production, where the quantitative phase is an important phase to test correlations and regressions between independent and dependent variables to confirm or disconfirm research hypothesis and theory. Interpretations will be mixed together to answer the qualitative and quantitative questions of this research.

#### 3.13.1 Qualitative Phase

##### Document Analysis

Document analysis is another methodical technique for qualitative data mining. It is an elaborative process where a list of documents is provided for analysis, description and interpretation. Document analysis is defined as "the collection, review, interrogation, and analysis of various forms of text as a primary source of research data. Documents suitable for analysis might be authoritative, agenda-based, personal, multimedia-based, or historical" (O'Leary, 2014, p. 183). In this way, the researcher synthesizes only firsthand

texts to collect original and direct evidence on the specific event. In this way, the researcher organizes the entire passages and quotations into general themes and categories for analysis and exploration, looking for convergence and corroboration to provide credibility to the event (Bowen, 2009). Document analysis is not used as a stand-alone method, but “in combination with other qualitative research methods as a means of triangulation” to reduce bias (Bowen, 2009, p. 28). In this research, document analysis is a cost-effective method, chosen by the researcher to corroborate his theoretical findings, based on internal correspondences, reports, magazines, circulars and diaries, browsed on the GID system, so far. The researcher looks for emerging themes within the data and collects them into categories for analysis, using Nvivo<sup>4</sup>. Primary documents can yield a rich examination and provide a general picture to the grounded theory for quantitative investigation. Most of the pertinent themes and items, relevant in this study are only *de jure* ambitions, recommendations and rules of authors and organizations, which the researcher aims to investigate in reality for *de facto* outcomes. Document analysis will serve to emerge relevant key themes and items for further discussion in the focus group sessions.

### Focus Groups

Focus group is a qualitative strategy to explore an issue through focused opinions, perceptions and discussions between the participants and the researcher, on a table (Cameron, 2016). According to Kumar (2010), researchers spend sufficient time with their group participants to gain in-depth, rich and accurate information about their researched themes and questions. Issues discussed in focus groups are more specific and focused. Focus group data gathering is a similar technique to other techniques in qualitative research methods. This technique aims to generate hypotheses, develop instruments and answer qualitative questions. Therefore, it is mostly used than other techniques for its cost-efficiency (Kumar, 2010). In mixed sequential designs, the focus group is a good technique among social and economic scientists for data exploration and explanation.

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<sup>4</sup> NVIVO<sup>®</sup> is a powerful data analysis software for qualitative and mixed-methods research, which is designed to analyze a very rich data, including texts, audios, videos, images, interviews and focus group manuscripts. The software offers multiple coding data techniques on one main central project file. The software generates wonderful comparative images, interpretations, nodes, thematic queries and trees.

Focus group sessions may proceed either before or after the quantitative phase either to explore or explain the phenomenon. According to Creswell (2014), focus group discussions must be picture-perfect, if participants are between 6 and 8 members. Few participants may limit the diversity of opinions and more than 10 members could create chaos. The table includes only members with relevance to the study, on which the researcher directs the discussions. A list of themes and topics is prepared by the researcher beforehand to tame the group discussions (Kumar, 2010). In this research, focus group discussions will play a colossal role in the creation of instrument measures. The questionnaire is successfully developed and qualitative research questions were answered by the participants, at this stage. The focus group sessions explored an in-depth real experience about the GID system utilities to improve ethics of Good Governance among offices through its electronic interoperability and integration. The researcher provided the focus-group participants with the chart of the developed constructs and items in each session for revision at home. In this way, the participants brought new elements and discussions, after being yeastily fermented in their minds. During my discussions, I felt how the participants always bring new recommendations and modifications to the research instrument, till the topic reached “the saturation point” (Kumar, 2010, p. 398). Effectively, focus group discussions reflected a powerful interrelationship with the literature review and qualitative findings.

### 3.13.2 Quantitative Phase

The qualitative data protocol produced valid instrumentation to answer the quantitative questions at the quantitative phase. Document analysis and focus groups are intentionally constructed by the researcher to further study the effect of eGovernment Whole-of-Government Approach (eGovWGA) on Good Governance, taking the Integrated System of Expenditure Management (GID) in Morocco, as a case for study. The exploratory qualitative findings will serve to develop a convenient measurement to gauge the causal effects among the studied variables. The questionnaire is developed in a way to answer the quantitative questions, using descriptive and inferential statistics. Descriptive statistics will

serve only as general background information about the population and their demographic characteristics, where the inferential statistical analysis will serve to answer the quantitative research questions. Exploratory and Confirmatory Factor Analysis is used to analyze the factor structure of the original developed instrumentation. The developed instrument model will undergo a firm evaluation for convergent and discriminant validity, using the last version of Smart PLS<sup>5</sup>. Partial Least Squares Structural Equation Modeling (PLS-SEM) is a second-generation statistical technique, used here to understand the causal relationships among research variables, thanks to the sophisticated multivariate data analysis methods of Smart PLS. Indeed, PLS-SEM is a statistical technique that combines based approaches of logistic and multiple regressions, multivariate data analysis, cluster analysis, multidimensional scaling and Confirmatory Factor Analysis (CFA) to confirm or disconfirm the priori developed hypotheses and quantitative research questions (Hair, Hult, Ringle, & Sarstedt, 2013). It is important here to indicate that correlation is just a statistical test to indicate relationship and association between variables, but not causation (regression). PLS quantitative software can generate an Importance-Performance Matrix Analysis (IPMA) for the studied effects, drawing relative conclusions about the low-performing constructs or variables, but important for managerial actions. The two phases will be merged together at the end to answer the mixed method question: Is there any relationship between the *de jure* documentation and *de facto* outcomes of eGovernment Whole-of-Government Approach on Good Governance in Morocco?

### 3.14 Summary

The following research study employs a triangulated exploratory sequential mixed research method (qualitative and quantitative) to explore and investigate the integration of eGovernment integrated approaches for Good Governance in the Moroccan public sector. This chapter presents the overall methods for data collection techniques, employed to

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<sup>5</sup> SmartPLS is a powerful quantitative software for structural equation modeling (SEM), Importance-Performance Analysis and other techniques, that are based on the use of the partial least squares (PLS) or path modeling analysis. PLS resembles AMOS, but with more user-friendly options and graphical functions for users and researchers.

answer the research questions in this study. This chapter explains to the reader the reasons beyond using sequential exploratory design: document analysis and focus groups at the qualitative phase to generate a valid and reliable instrumentation to be used at the second phase. Methodology describes the participants' professional and academic backgrounds and the characteristics of their selection, to participate in focus group discussions. The chapter displays the procedures of data collection as well as the statistical tests and software used for quantitative analysis. The findings and the interpretation of both qualitative and quantitative phases will be discussed in the coming chapters 4 and 5, successively.

## Data Analysis and Results

### 4.1 Qualitative Analysis

#### 4.1.1 Document Analysis

**T**o respond to the qualitative questions raised at the methods section, a list of selected documents about the system GID have been analyzed in order to answer the raised qualitative questions in chapter 3. Furthermore, the willied up themes and items helped a lot in the construction of our questionnaire (instrument). However, document analysis is not used as a stand-alone method, but it is triangulated with focus group sessions in order to increase trustworthiness, reliability and validity in this research (Creswell, 2014). Both methods will help to elicit essential themes and items for investigation and analysis at the quantitative coming section. Documents constitute a reviewed source of data that contain excerpts, quotations and passages, collected and reported by qualified researchers and experts in the field. In this regard, the researcher provides a list of reports, newsletters, magazines, videos, leaflets and images, written about the GID system so far.

The selected documents underwent a precise revision to predefine the used thematic codes, based on a manual and transparent coding, using Nvivo. The codes developed by this qualitative software will help to capture the pertinent thematic performances of the GID system for the promotion of Good Governance in Morocco. Therefore, the willied codes and themes will serve to orient the discussion of the focus group sessions. The material of

documents and focus groups will be analyzed by Nvivo for objectivity, transparency and credibility of the findings. The researcher mined all the existing data, recorded about the GID system, and skimmed it over several months. The researcher managed to filter out only 38 pieces of data for investigation on Nvivo software, for their relevance to the topic. The data selected for analysis is cited in table 4.1, which includes: YouTube videos, newspaper articles, brochures, field notes and magazines and a circular, generally written in French.

References	Codes
Bonne Gouvernance du GID Arabe	1
Brochure GID, Votre système de Gestion Intégrée de la Dépense	6
Cadre Général d'Interopérabilité	17
Circulaire de Monsieur le Ministre cadre d'Interoperabilité au Maroc	0
La bonne gouvernance de la dépense publique	2
Depliant GID	15
Dupliant GID	1
GID la Lutte Contre La Corruption	3
GID Newspaper	9
GID Newspaper arabic	15
GID, Votre système de Gestion Intégrée de la Dépense	23
Gouvernance territoriale et reddition des comptes	0
La Dématérialisation de la Commande Publique	23
La 7ème édition du colloque international sur les finances publiques	6
la Bonne Gouvernance de la Dépense Publique	7
La Promotion de la Bonne Gouvernance dans la Gestion des Finances Publi	2
La Promotion de l'Intégrité dans les Marchés Publics	21
la Reforme Administrative au Maroc	6
La Réforme du Contrôle de la Dépense Publique	1
La Transparence des Finances Publiques	0
Legitimizing factors for the public sector accounting reform Rachid Amgha	2
Les Objectifs Du Système GID	0
les Publications de la TGR	8
Modernisation de la Trésorerie Générale du Royaume	11
Necessite d'un Systeme Intégré de la Dette Publique	8
Noureddine Bensouda_ Finances publiques _ Comment intégrer la _Justice	20
Présentation sur le Système GID par Mr.Nadir Tijani	9
Press Book sur le GID	7
Programme de Dématérialisation de la Commande Publique	8
Quels systèmes d'information pour laGestion Financière du Secteur Public I	12
Soumission électronique sur le GID	16
Stratégie Nationale pour le Maroc Numerique	3
Système de Gestion Intégrée de la Dépense	0
Système de Gestion Intégrée de la Dépense Information Projet GID	3
Transparence GID	21
نمط تدبير المالية العمومية يجسد سوء الحكامة الادارية بالمغرب حازب	24
GID 2003 3 منشور رقم	21
واقع الاختلالات المالية بالجماعات المحلية	24

Figure 4.1: List of document analysis

### Thematic Analysis

The researcher identifies all the necessary passages in the following data. Relevant themes are highlighted as important nodes for further investigation in the focus group discussions. After a meticulous thematic analysis of the entire document passages and videos. The software willed up the key thematic terms in different rubric sizes and colors, dispatching them based on the number of items coded for each node (theme). Table 4.2 fosters the willed up themes, accordingly.

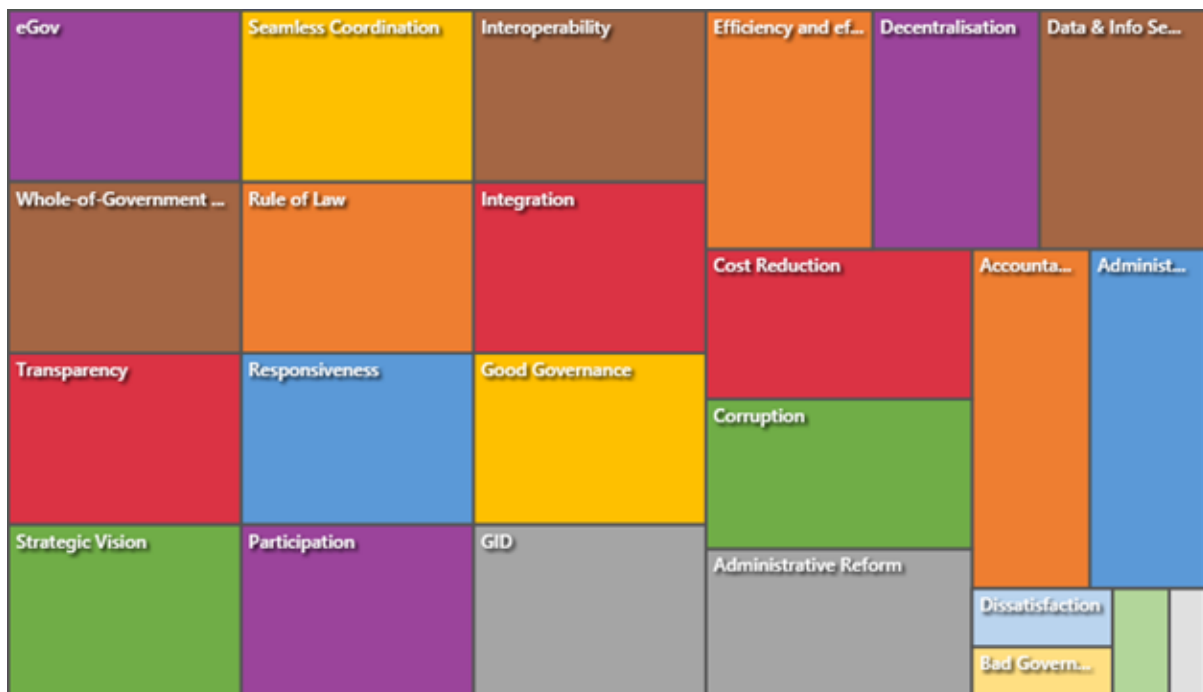


Figure 4.2: Emergent themes in document analysis

Table 4.1: References of the coded themes

<b>Nodes</b>	<b>References</b>
Nodes\\Administrative Simplification	18
Nodes\\Cost Reduction	15
Nodes\\Responsiveness	15
Nodes\\Strategic Vision	15
Nodes\\Efficiency	14
Nodes\\Rule of Law	14
Nodes\\eGovernment	13
Nodes\\GID	13
Nodes\\Good Governance	13
Nodes\\Interoperability	13
Nodes\\Transparency	13
Nodes\\Accountability	12
Nodes\\Administrative Reform	11
Nodes\\Integration	11
Nodes\\Participation	11
Nodes\\Whole-of-Government Approach	10
Nodes\\Data and Info Security	9
Nodes\\Corruption	8
Nodes\\Decentralization	8
Nodes\\Dissatisfaction	8
Nodes\\Bad Governance	7
Nodes\\Hierarchy	6
Nodes\\Dissatisfaction	5
Nodes\\Seamless Coordination	5

### Themes in a Word Cloud Query

Nvivo generates a word cloud picture for all the pertinent themes, based on their relevance frequency in the decoded documents, as indicated in the chart above. The following word cloud is extracted by the software as a convergent image from different sources to introduce transparently the emergent lexical and themes used in the list of documents, for the readers. Indeed, all the provided documents about the GID system, are relevant to different sources including eGovernment plans, newspapers, manual and brochures. Such statements are important to explore the concepts of the GID executives and experts vis-à-vis the system. These documents and statements produce important units and findings that help the researcher to enhance triangulation in the study and reduce any potential bias that may be produced out of a single study (Bowen, 2009).



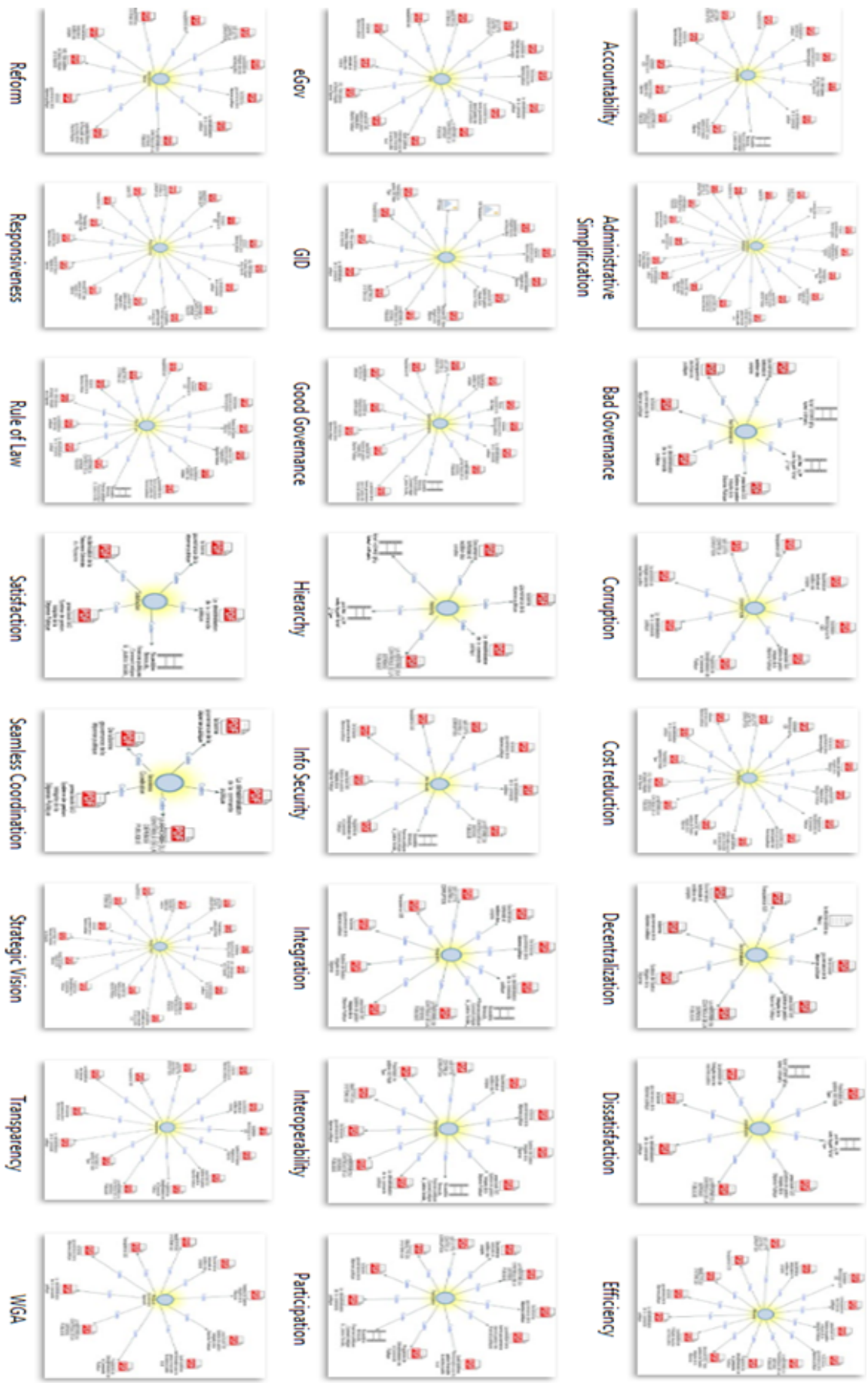


Figure 4.4: Association between each node and its references

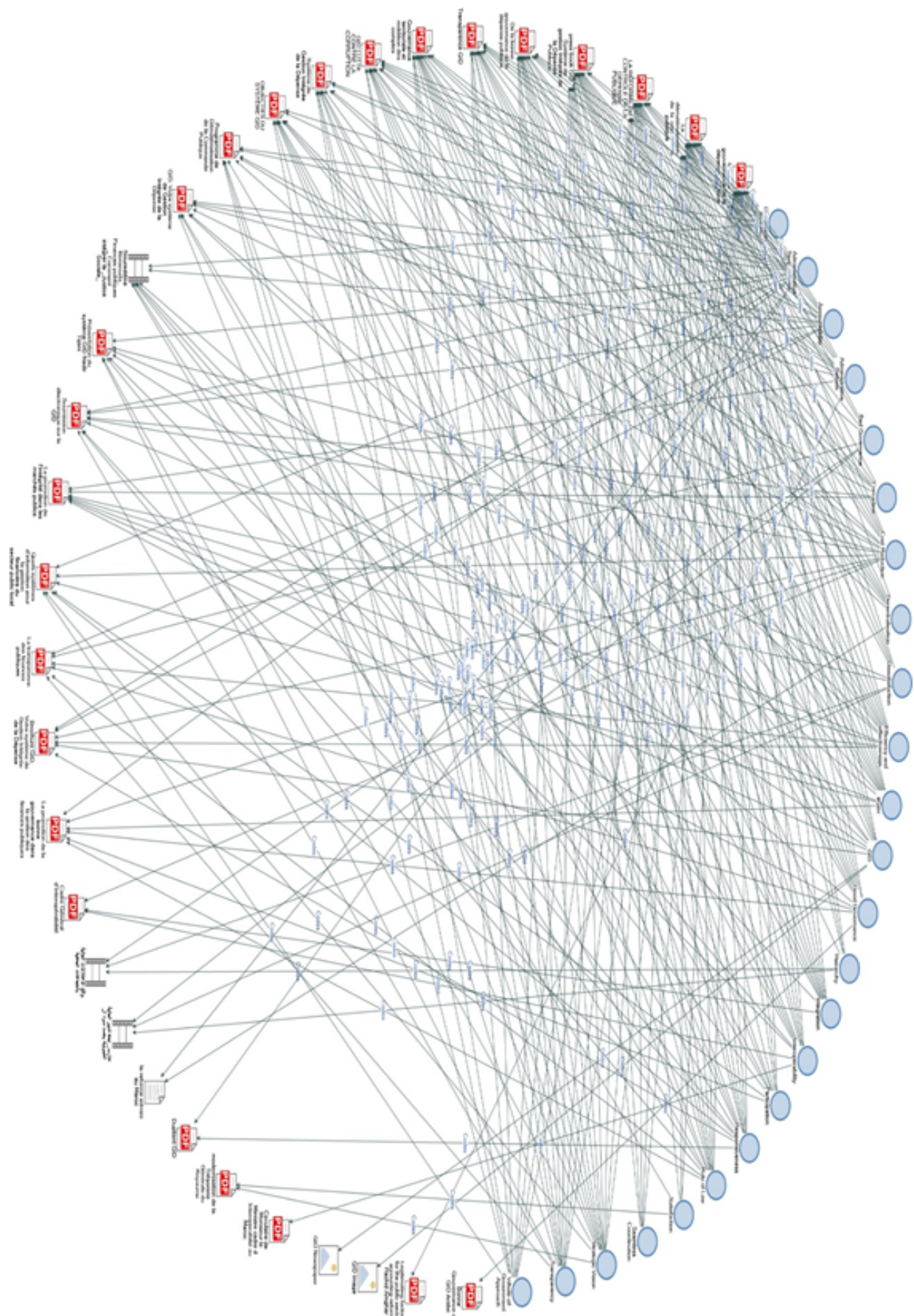


Figure 4.5: Association between the nodes and references



Figures 4.4 and 4.5 show the way documents tackle the relevant associations between GID system and Good Governance or between Good Governance themes themselves. Nvivo derives a clear map of all the existing relationships between the pertinent themes in document analysis, as indicated in figure 4.6. In this way, the researcher carries all the emerged themes into focus group discussions for further exploration and analysis. Focus group discussions will help a lot to study these associations and stir additional reactions and responses, beneficial to build the instrument questions. On the other side, the word cloud in figure 4.3 contains a rich thematic lexical, helping the researcher to explore all the meaningful insights relevant to the application of the GID and its promotion for Good Governance. At this stage, the researcher can compare the Good Governance values reviewed in field documents and those values reviewed at the literature review. The word cloud indicates the extent to which its essential and incidental themes overlap and corroborate with the developed themes and variables, obtained through literature review. The networking of the relevant themes in document analysis develops a clear mind map on Independent and Dependent variables, to be investigated in field work. Consequently, the studied documents offer a solid background and context to the researcher in order to impinge more upon the themes, more with in-depth investigation in focus group discussions. Figure 4.7 indicates how the themes are classified into families of exogenous and endogenous variables in one model, as being developed by document analysis, focus group discussions and literature review.

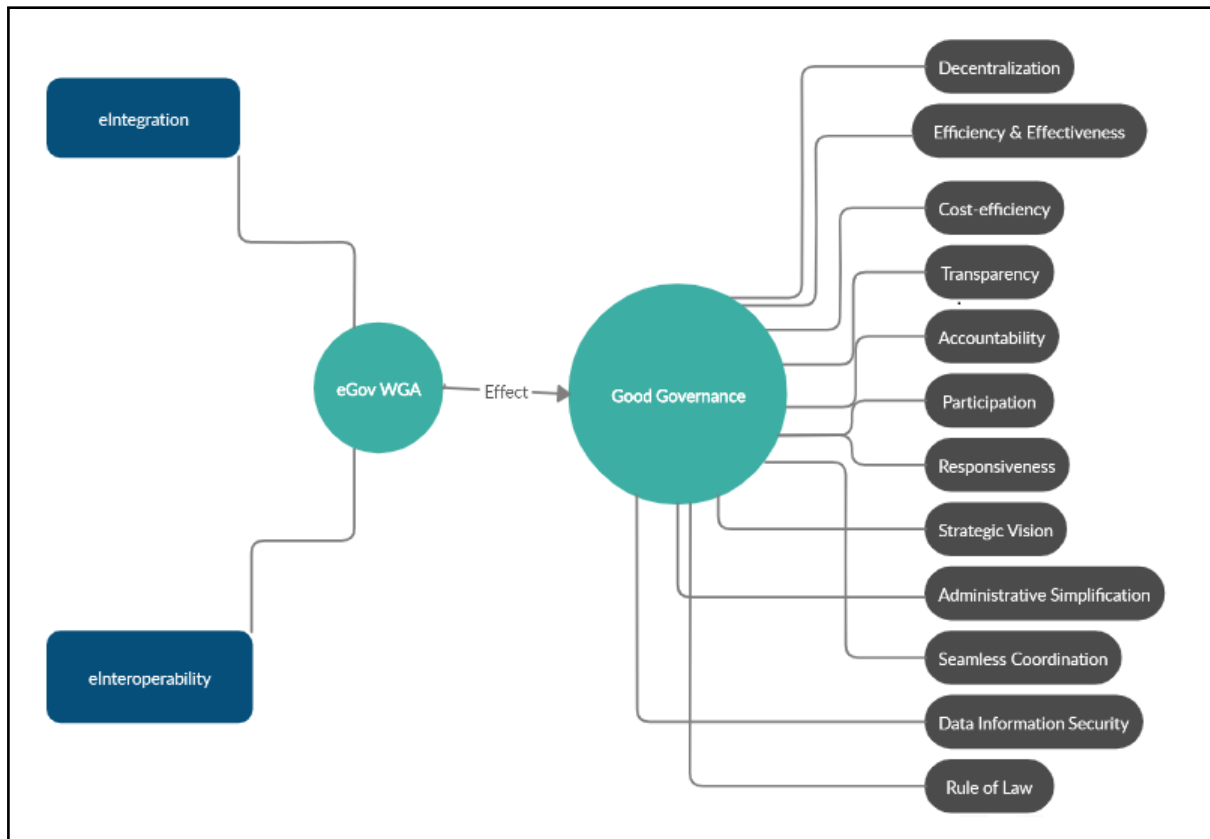


Figure 4.7: Model of exogenous and endogenous variables

### 4.1.2 Focus Groups

Six public agents participated in the focus group discussions to look at the roles of the GID system and its initiative to promote Good Governance between offices. The researcher built his discussions with the group, based on the themes developed in document analysis seeking to mitigate the limitations of theory and helping to explore the success or the failure of the GID system in Morocco. Such discussions are useful to elicit different opinions of different officers, working with same application, at different administrations. The Researcher invited the participants to take part in the discussions at the café. The interviewer chooses for an informal setting so that the interviewees feel free to express their perceptions, experiences and understandings towards the GID system and its endeavors for Good Governance. The interviewer prepared, beforehand, the themes for discussion, and formed them in the following questions:

## Focus Group Questions

1. How the GID system enhances law and regulation for the promotion of integrity in the management of the Moroccan public expenditure?
2. How do you perceive the electronic integration and the Whole-of-Government Approach of the GID system in your transactions?
3. How do you perceive the electronic interoperability and transactions of the GID system between your back offices?
4. How the GID system promotes efficiency and effectiveness of expenditure management in Morocco?
5. How the GID system reduces cost and generates economies between the integrated offices in Morocco?
6. How the GID system promotes transparency and openness in the management of public expenditure in Morocco?
7. How the GID system promotes accountability and responsibility in the management of public expenditure in Morocco?
8. How the GID system promotes your participation and other stakeholders in the management of public expenditure in Morocco?
9. How the GID system promotes rapid responsiveness and reaction towards the management of public expenditure in Morocco?
10. How the GID system can promote clear strategies and visions for the management of public expenditure in Morocco?
11. How can the GID system simplify procedures and transactions between back offices working on public expenditure?
12. How the GID system streamlines your coordination and transactions for a good management of public expenditure?
13. How the GID system promotes data and information transactions security against any type of piracy or misuse?
14. How the GID system promotes the decentralization of workflow and expenditure management in Morocco?
15. How can the eGovernment Whole-of-Government Approach (eGovWGA) reform governance in the Moroccan Public Sector?

16. To what extent can the silo-based approach hinder Good Governance in the Moroccan public sector?

All the following questions are tackled freely with the participants, who belong to different administrations and delegations, but integrated on the GID system in Morocco. The researcher chose to focus only on one single question (or theme), till the items of discussion are saturated, as recommended by Creswell (2014). The researcher penciled and documented all the statements of the participants accurately, because they refused to be audiotaped or filmed. The following graphs summarize the participants' reactions and their feedback vis-à-vis the presented themes.

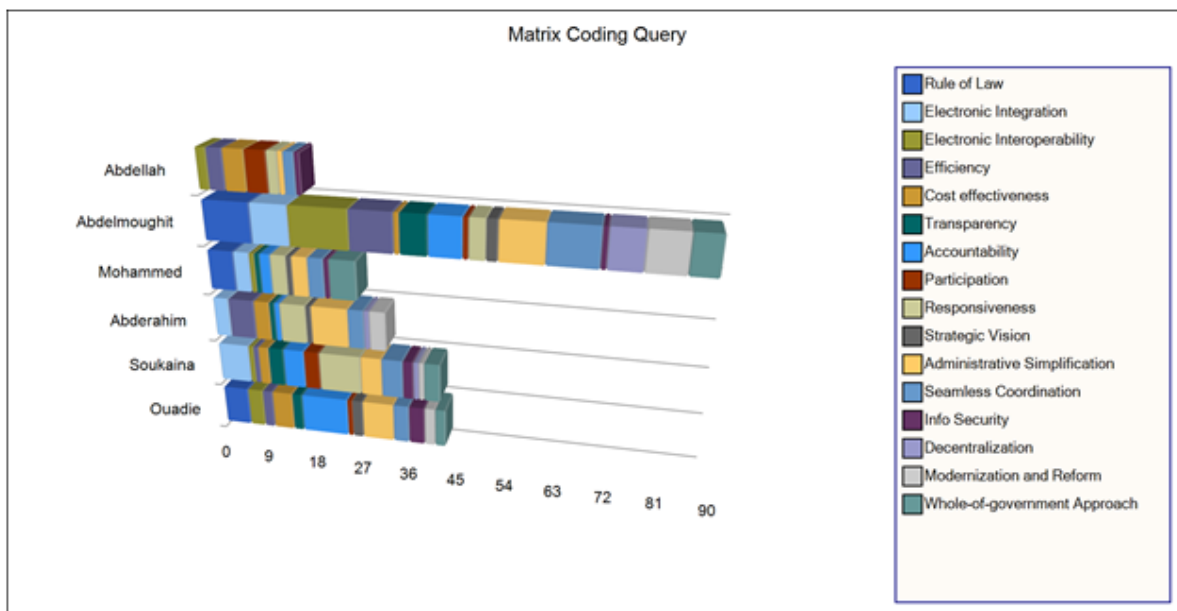


Figure 4.8: Distribution by themes

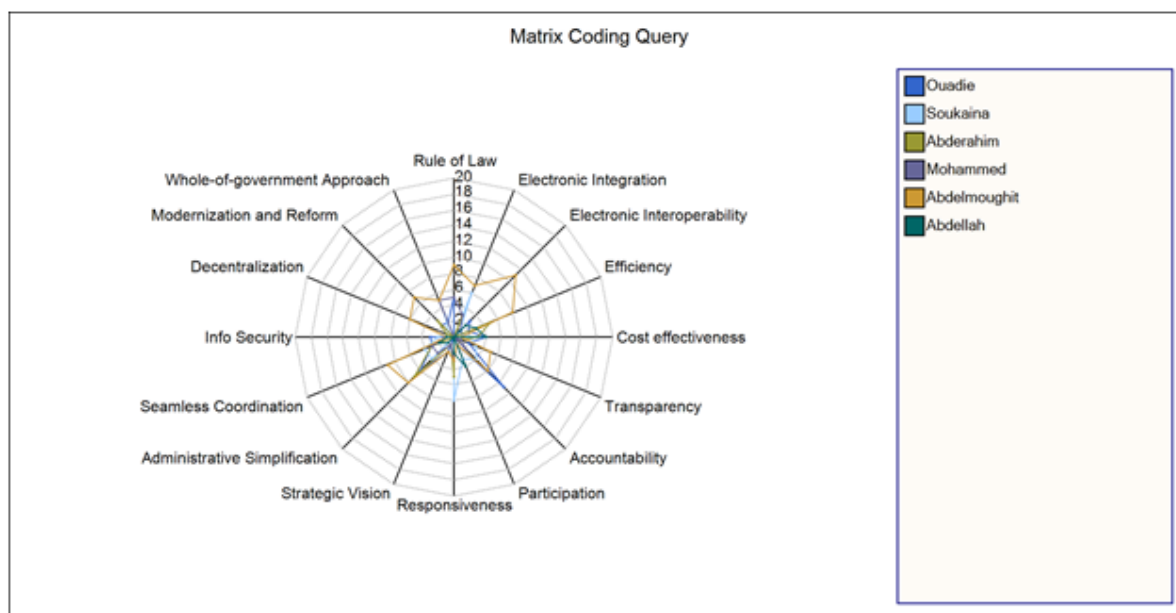


Figure 4.9: Distribution by participants

The diagrams indicate that Mr Abdelmoughit is an active member who reacted generally to all the relevant questions (themes), at the discussion series, followed by Mr Ouadie and Mrs Soukaina. The researcher downloaded the focus group transcript into Nvivo, for analysis, after being typed and revised with the participants. I hereby introduce the results of the focus group discussions in word trees, as being extracted by Nvivo. The decoded respondents items and word trees for each theme will be attached at the appendices, for transparency of data collection methods.

### Theme 1: Integration

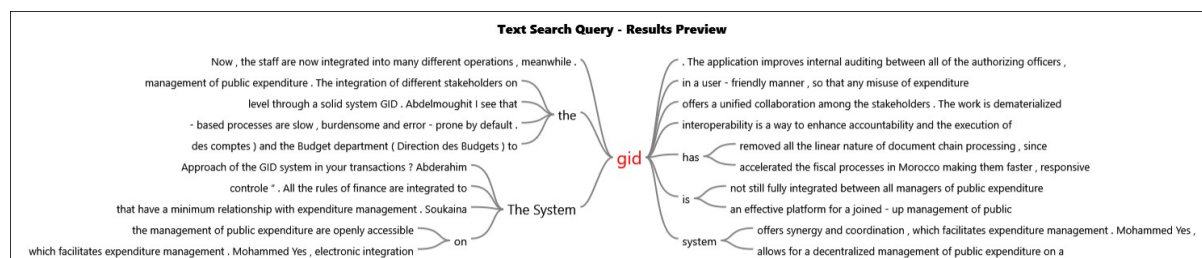


Figure 4.10: Integration in word tree

The word tree above summarizes the participants' responses, as being auto-coded by the used software. Most of statements begin with the word **GID** and followed with the values the system could bring as benefits to public administration. The word tree in figure 4.10

indicates a certain satisfaction among the participants towards the GID as an integrated, except for some who see that it still needs to integrate other offices electronically more than the existing ones (refer to the focus group transcript in appendices).

**Theme 2: Interoperability**

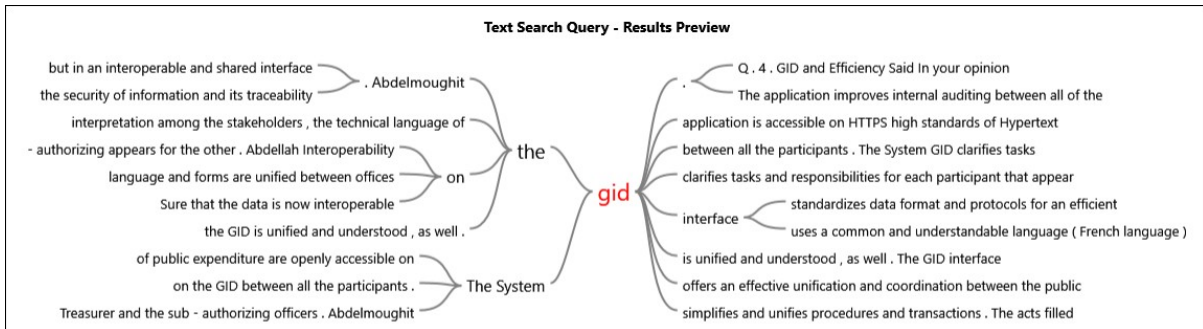


Figure 4.11: Interoperability in word tree

The word tree summarizes the feelings and statements of the respondents about the electronic interoperability of the GID system. Generally, the interviewees indicated that the platform GID is an interoperable platform between offices. It unifies workflows interfaces and languages, and standardizes data format and protocols. It offers a secure electronic interoperability and transaction between the stakeholders to work in a Whole-of-Government Approach, managing public expenditure efficiently in Morocco.

**Theme 3: Efficiency and Effectiveness**

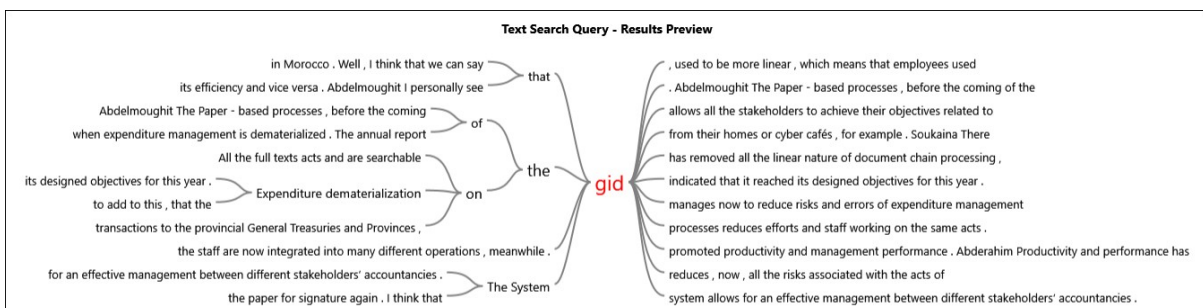


Figure 4.12: Efficiency and Effectiveness in word tree

The word tree extracted about the theme *Efficiency and Effectiveness* summarizes the reactions of the participants towards the question of the moderator: How the GID system

promotes efficiency and effectiveness of expenditure management in Morocco? Generally speaking, the participants showed their satisfaction towards the activities of GID system to promote efficiency and effectiveness in the management of public expenditure. The system dematerializes and orchestrates public expenditure among different stakeholders, reducing risks in its managements. GID is perceived to promote productivity and performance to achieve the desired objectives.

#### Theme 4: Cost Reduction

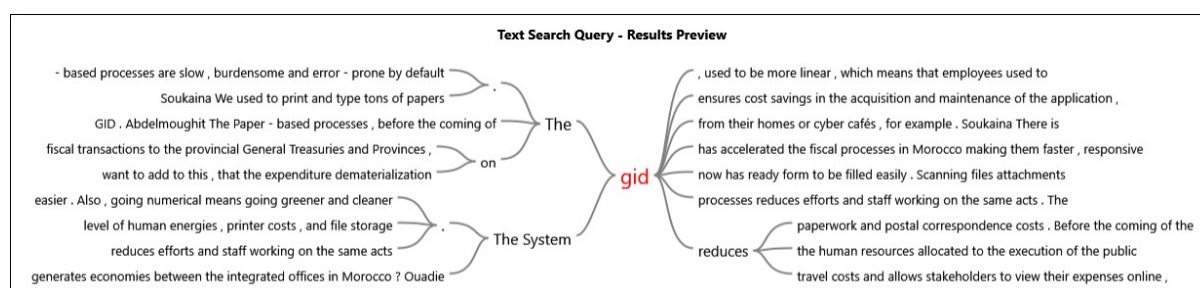


Figure 4.13: Cost Reduction in word tree

The participants showed their satisfaction towards the GID endeavors to reduce costs and red tape. The paperwork and the postal correspondence saw a clear reduction starting from 2010, when the system is integrated to public expenditure management. The system GID reduces also the number of human resources allocated to the execution of the public expenditure, maintenance of the application and other savings, which rendered important economies to the local and national offices.

#### Theme 5: Transparency

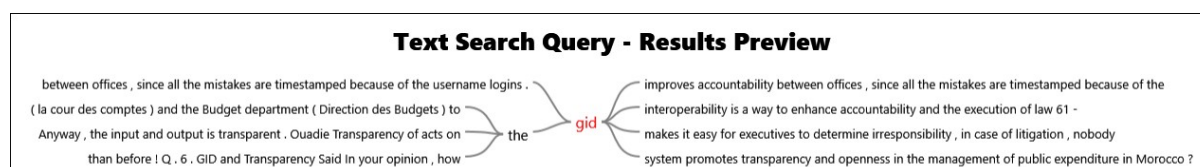


Figure 4.14: Transparency in word tree

The text search query 4.14 for the theme *Transparency*, on Nvivo, extracted the following short sentences that summarize the statements of the respondents to answer

together how the GID system promotes transparency and openness in the management of public expenditure in Morocco. The interviewees see that the GID is a transparent system which fosters a clear and open management of expenditure between all the integrated offices in Morocco. The system identifies accounts and acts, since their creation and provides a clear budget transparency between national and local offices.

### Theme 6: Accountability

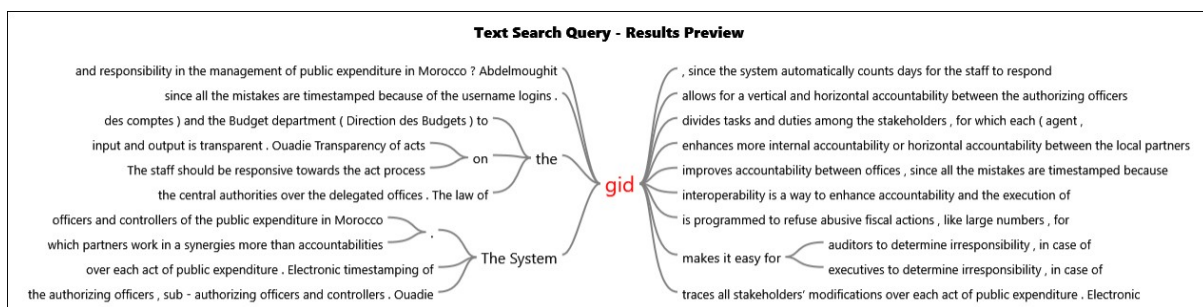


Figure 4.15: Accountability in word tree

The participants see that the implementation of the GID system has strengthened responsibility and accountability mechanisms between offices. In their opinion, the System GID allows for a vertical and horizontal accountability between the authorizing, sub-authorizing officers, controllers, auditors and direction of the Budget in Morocco, because GID traces all stakeholders' modifications over each act of public expenditure and divides tasks among the stakeholders, in which every (agent, service, organization) is held accountable for his/her duties. Mr Ouadie added that the electronic timestamping<sup>3</sup> of the system GID makes it easy for auditors to determine irresponsibility, in case of litigation<sup>4</sup>.

### Theme 7: Participation

<sup>3</sup>The way the system GID inserts automatically the date and time in minutes and seconds into a budget act at regular intervals. In this way, the order of acts can not be changed manually on the system.

<sup>4</sup>Refer to the focus group transcript at the appendices.

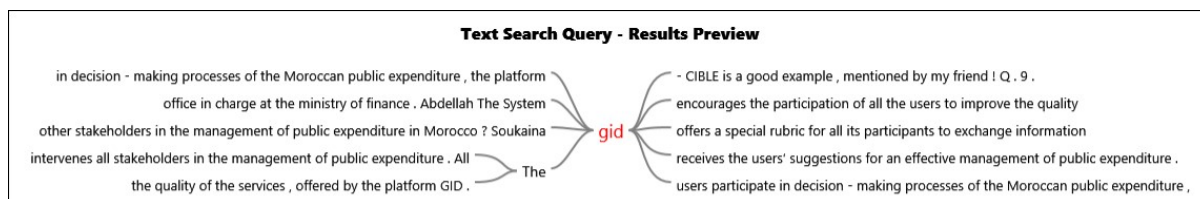


Figure 4.16: Participation in word tree

Question number 7, asked in the focus group discussions, aims to explore in depth how the GID system promotes the participation of the stakeholders in the management of public expenditure in Morocco. The text search query for this theme indicates that GID-CIBLE<sup>5</sup> is already an existing rubric within the system that receives the users’ suggestions. According to the participants, the system GID encourages the users to participate in decision-making for efficiency and good management of public expenditure in Morocco.

**Theme 8: Responsiveness**

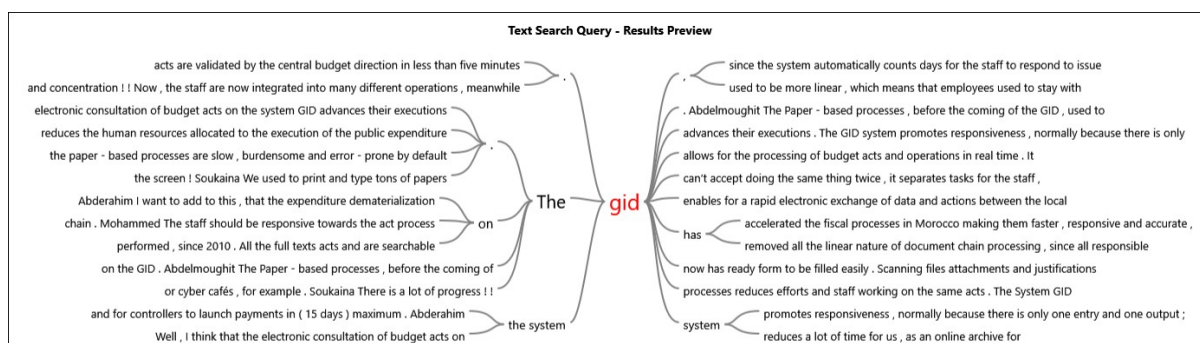
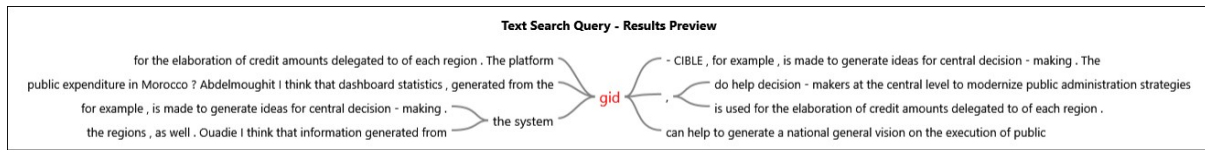


Figure 4.17: Responsiveness in word tree

Question number nine is asked to thrive the possible reactions of the group. Most of the participants reacted to the following theme, as indicated by the diagram in figure 4.17. The text search query above summarizes the responses towards the responsiveness of the GID. According to the participants, the system GID allows for the processing of budget acts and operations in real time, as it reduces red tape and fragmentation, related to coordination and transaction. All in all, the electronic consultation of budget acts on the system GID advances their executions in real time.

<sup>5</sup>A new single application on the system GID which integrates all the actors to participate together in the making of public expenditure all over the country, offering the possibility of promoting cross-border access to public markets at the central level for decision-makers.

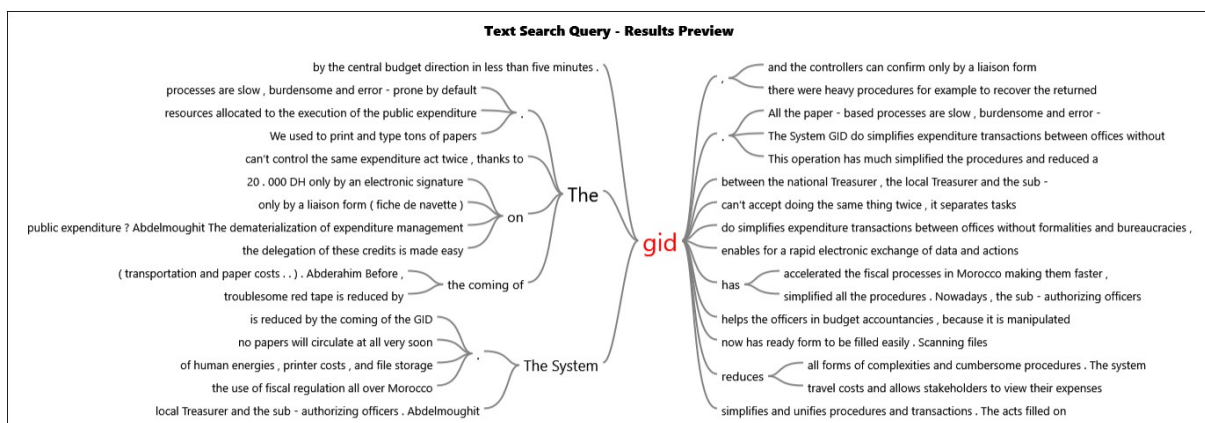
**Theme 9: Strategic Vision**



**Figure 4.18: Strategic Vision in word tree**

The text search query about the theme of *Strategic Vision* reviews the possible response items of the focus groups. The participants indicated that the GID helps a lot to generate clear strategies and visions for the management of public expenditure in Morocco, because of the produced statistical dashboards of the system. The system GID helps to modernize public administration strategies and rationalize expenditure management in the country, due to the extracted regional numbers and statistics. Mr Ouadie<sup>6</sup> added that the platform GID-CIBLE of the system can promote decision-making, due to the availability of information.

**Theme 10: Administrative Simplification**



**Figure 4.19: Administrative Simplification in word tree**

The word tree in figure 4.19 indicates that all focus group respondents are satisfied about the endeavors of the GID system to simplify procedures and transactions between back offices working on public expenditure in Morocco. The Integrated System of Expenditure Management is believed to streamline and simplify transactions between

<sup>6</sup>Informatics engineer and a sub-authorizing officer in the Budget Office.

offices without formalities and bureaucracies. The system GID prevents users to duplicate their works and tasks. It reduces all forms of complexities and cumbersome procedures between offices.

**Theme 11: Seamless Coordination**

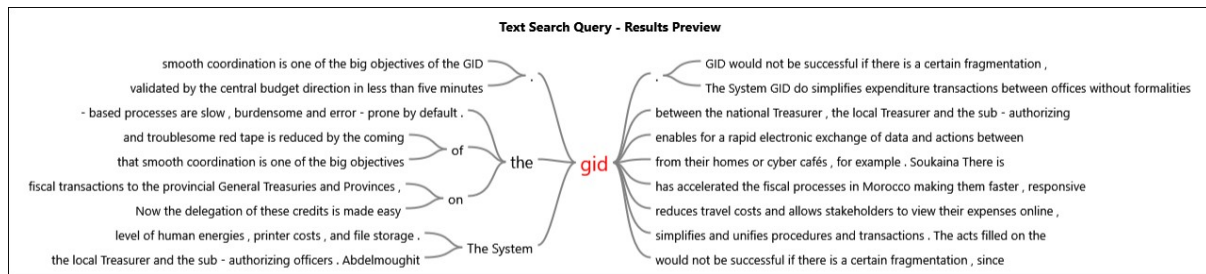


Figure 4.20: Seamless Coordination in word tree

Question number 12: "How the GID system streamlines your coordination and transactions for a good management of public expenditure?", in the focus group transcript, generated important answer reactions among the participants. The respondents indicate their approval towards seamless public expenditure execution processes, in general. Accordingly, the GID system is trusted for its seamless coordination without any blockage or fragmentation in budget acts processing. The system GID enables for a rapid electronic exchange of data and actions between the users, because of the simplified transactions and unified interoperability mechanisms between all the integrated offices all over the country.

**Theme 12: Information Security**

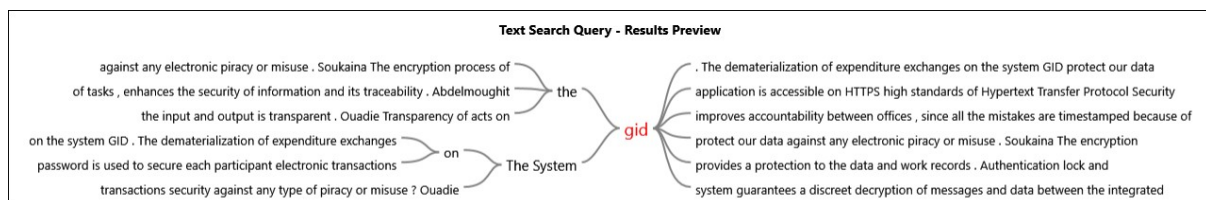


Figure 4.21: Information Security in word tree

The word tree summarizes the experiences of the respondents about the GID system and its roles to promote data and information security. Generally, the interviewees indicated that the platform GID provides an optimal protection for data and work records because

of its authentication lock and password protocols<sup>7</sup>. The dematerialization of expenditure exchanges on the system GID protect the work folders against any electronic piracy. All in all, the encryption process of the GID system guarantees a discreet decryption of messages and data between the integrated offices.

### Theme 13: Decentralization

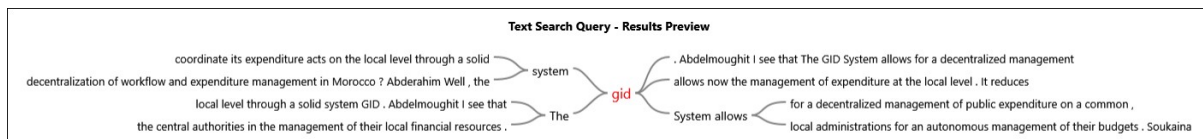


Figure 4.22: Decentralization in word tree

The word tree 4.22 ,extracted from Nvivo, summarizes the reactions of the participants vis-a-vis the theme of *Decentralization*. The respondents stated that the system GID decentralizes management of public expenditure on a common, integrated and unique system in the Kingdom, reducing dependence to the central administration. The system regionalizes the management of public expenditure in Morocco and allows local administrations for an autonomous management of their budgets.

### Theme 14: Rule of law

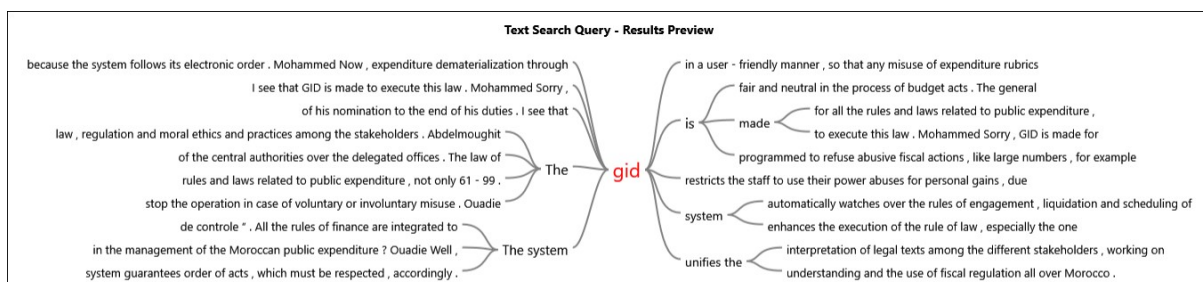


Figure 4.23: Rule of law in word tree

The researcher inquired about the GID efforts to promote law and regulation and integrity in the management of the Moroccan public expenditure. The question rendered different response items among the members of the group. Mr Abdelmoughit stated that

<sup>7</sup>Refer to figure 2.2 in chapter 2.

GID is manipulated to execute law number 61-99<sup>8</sup>, related to accountability and responsibility. The GID system automatically watches over the rules of engagement and restricts the user administrative power abuses for personal gains. The participants continued that the system GID maintains fairness and neutrality in the execution of budget acts and the moral ethics and practices among the stakeholders. Expenditure dematerialization on the GID unifies the interpretation of legal texts among the stakeholders.

### Theme 15: Modernization, Reform and the Whole-of-Government Approach

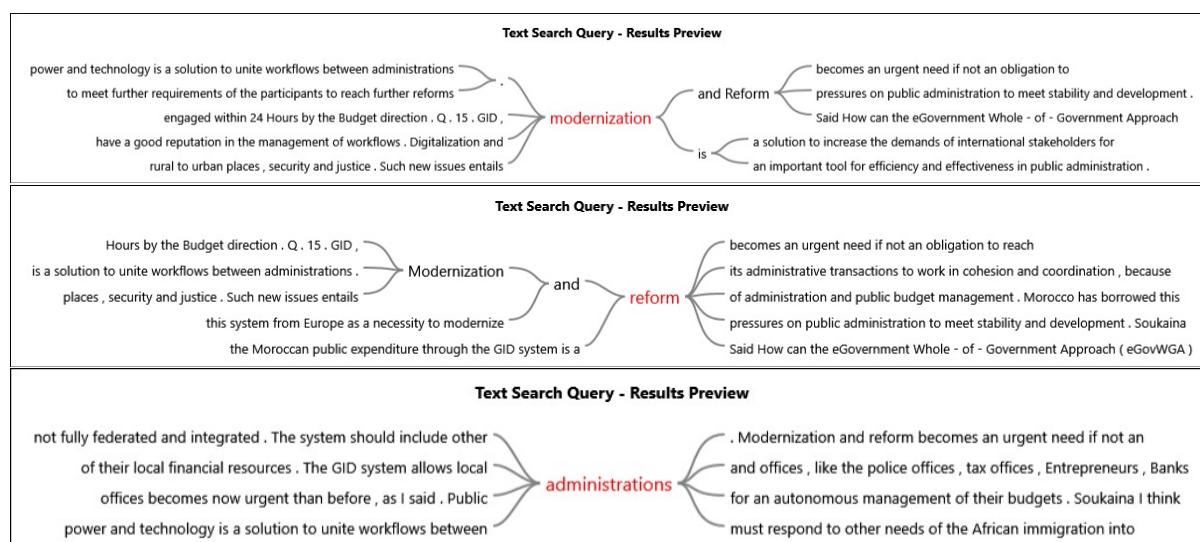


Figure 4.24: Modernization, reform and the whole-of-government approach in word trees

The interviewer aims to collect further qualitative statements from the interviewees in order to answer the two qualitative questions asked in chapter 3, which can not be answered quantitatively:

1. **How can the eGovernment Whole-of-Government Approach (eGovWGA) reform governance in the Moroccan Public Sector?**
2. **To what extent can the silo-based approach hinder Good Governance in the Moroccan public sector?**

<sup>8</sup>The law 61-99 is a clear financial accountability referential which clarifies and limits the responsibility of each public agent in the holistic management of public expenditure on the system GID.

The discussed qualitative questions are summarized and classified into three big themes: Modernization, Reform and the Whole-of-Government Approach as indicated in figure 4.24. In this direction, Mr Ouadie states that the silo approach hinders the management of financial resources or other resources. Synergy between offices is a power and technology is a solution to unite workflows between administrations for Good Governance. “Modernization and reform becomes an urgent need if not an obligation to reach Good Governance, democracy, human and economic development and prosperity”, Mr Ouadie said.

Mr Abderahim from the province of El Hajeb demonstrated how the dematerialization of public expenditure meets the current needs of public administration. “Improvements are carried day in day out in the system to meet further requirements of the participants to reach further reforms. Modernization is an important tool for efficiency and effectiveness in public administration. It is a way to reduce paper use, ambiguity and duplications. Still, some officers resist clarity and transparency and prefer ambiguity that serves their personal needs (corruption). “Only the reduction of paper burden is a big gain for administration”, Abderahim said.

Mr Abdelmoughit who is an internal auditor at the Ministry of Finance states: “Dematerialization of the Moroccan public expenditure through the GID system is a reform to administration and public budget management. Morocco has borrowed this system from Europe as a necessity to modernize and reform its administrative transactions to work in cohesion and coordination, because the fiscal management goes through different operations that call for harmony between offices: registration, planning, visa, approval, validation and execution of the budget<sup>9</sup>. Added to the audit of the high authorities”. He continues: “this chain of work necessitates coordination and unity between local and national offices. All the back office and front office systems introduced by Morocco so far, have a good reputation in the management of workflows. Digitalization and modernization is a solution to increase the demands of international stakeholders for Good Governance and the demographic speedy rising demands. Solidarity between public offices becomes

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<sup>9</sup>The path of any budget act on the system GID in Morocco.

urgent now more than before, as I said. Public administration must respond to other needs of the African immigration into Morocco, foreign investments, citizen mobility from rural to urban places, security and justice. Such new issues entail modernization and reform pressures on public administration to meet stability and development”.

## 4.2 Quantitative Analysis

### 4.2.1 Demographic Data of the Respondents

A background information is recorded on the first page of the questionnaire. It includes six questions about the general background of the respondents (gender, age, academic level, profession, administration and region) in order to introduce the readers into the research framework and demographic characteristics of the study population, relating the findings to the studied population (Kumar, 2010).

#### Gender of the Respondents

As shown in figure 4.25, the total number of respondents is 253. The majority of the respondents who completed the questionnaire are males with a total of ( $n= 154$ ) respondents. The remaining respondents reported their gender as females with a total of ( $n=99$ ).

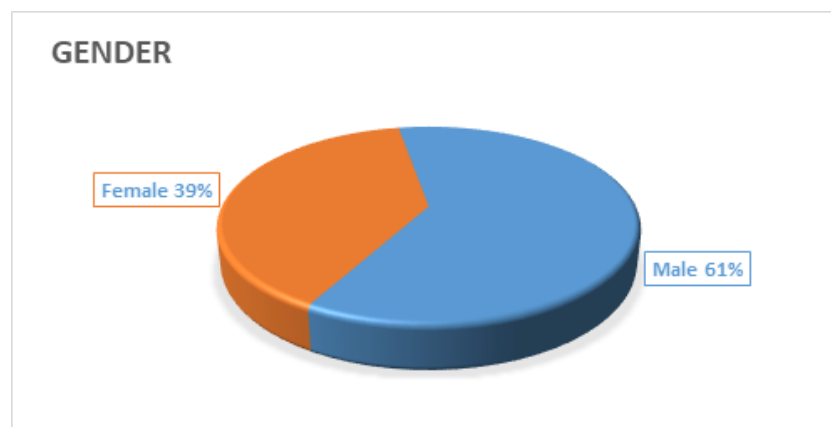


Figure 4.25: Distribution of respondents by gender

#### Age of the respondents

The demographic information about the age of the respondents is divided into three categories in the questionnaire, correspondingly to the age categories of the public servants working in the Moroccan public sector. Respondents between 36 and 55 are markedly a big proportion of the respondents with a total of ( $n=140$ ), whilst old public servants beyond

the age of 56 responded to the questionnaire with a total of ( $n=74$ ). The youth respondents constitute the lowest proportion of the participants with a number of ( $n=39$ ), as indicated by figure 4.26.

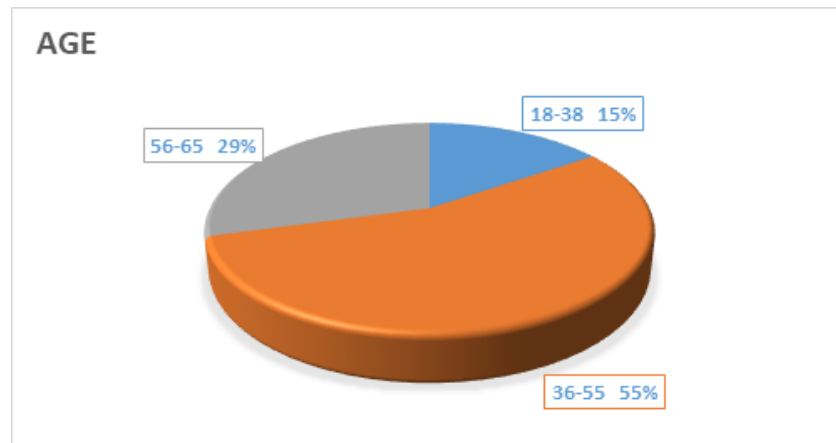


Figure 4.26: Distribution of respondents by age

### Academic level

The questionnaire collected a background information on the academic level of respondents. 39.9 % of the respondents declared that they have a BA degree. 21.3% of the respondents are graduated with a Master or equivalent. Whilst, 6.7% of the respondents have a baccalaureate degree, where 26.1% are with a BAC+2. However, only 3,6% of the respondents have a Doctorate Degree. 2.4% declared that they do not have even a baccalaureate degree, as shown in figure 4.27.

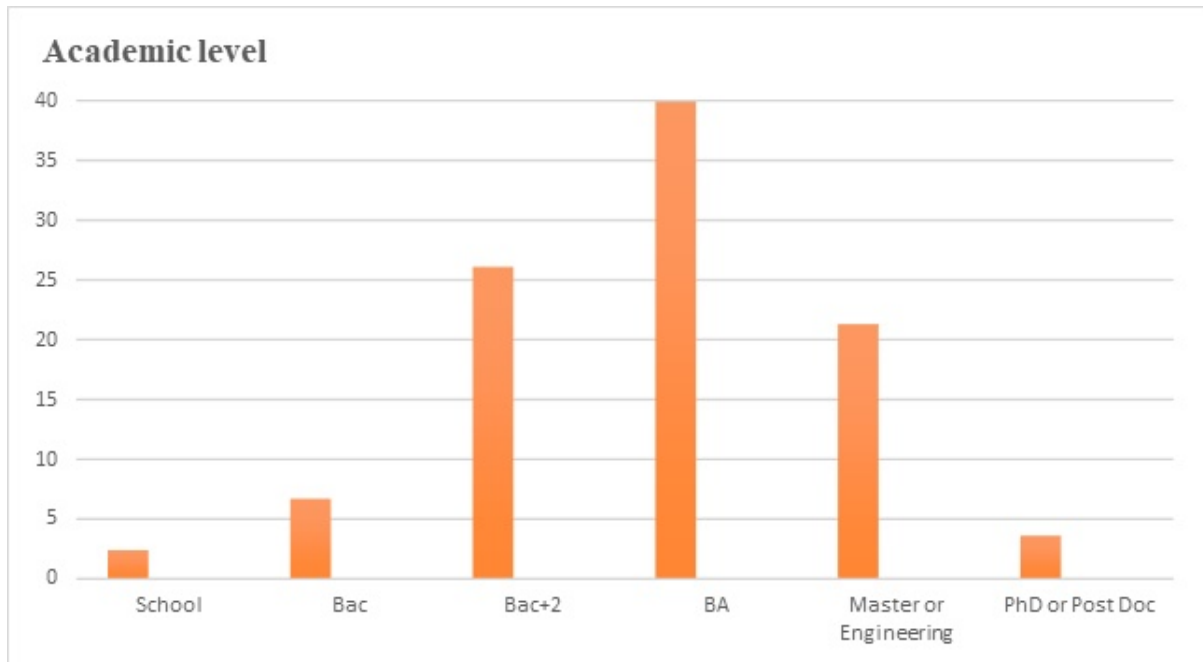


Figure 4.27: Distribution of respondents by academic level

### Profession

The profession is dependent on their academic level or years of service, the public servants have worked in the Moroccan public administration. 46% of the respondents declared that they are administrators, 30% work as as technicians, 13% are engineers. However, only 11% of the executives responded to the questionnaire, as indicated in figure 4.28.

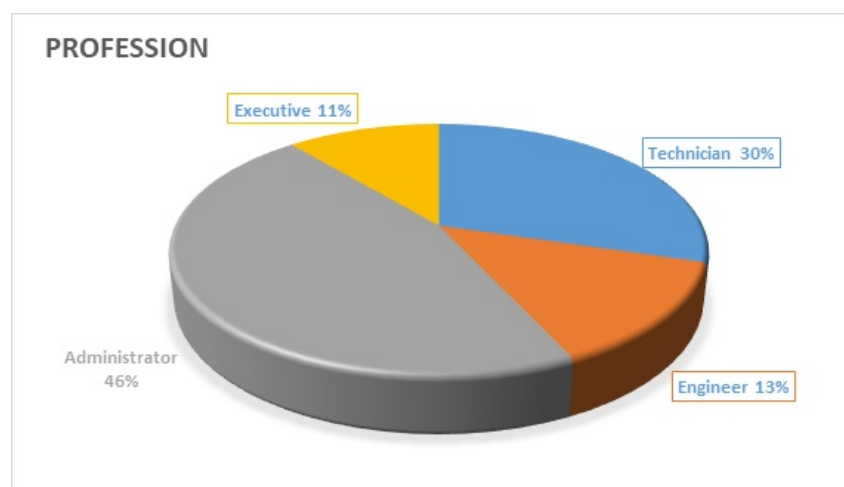


Figure 4.28: Distribution of respondents by profession

## Administration

This question asks the public servants working on the GID platform to classify themselves according to their administrations. The staff working under the ministry of finance either belong to *the budget department* as auditors or to the General Treasuries as *controllers* of the Moroccan public expenditure. However, the *authorizing officers* are always a workforce with a managerial authority to execute their budget. These people are frequently executives working at the ministries or representatives of their ministries, such as the Walis, Governors, Directors or Delegates. However, the staff working under the supervision of these authorizing officers are referred to as *sub-authorizing officers*<sup>10</sup>.

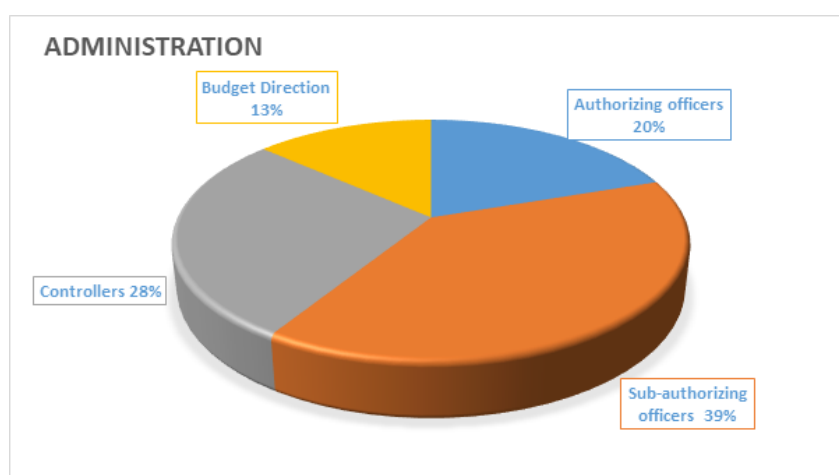


Figure 4.29: Distribution of respondents by administration

## Region

The respondents clustered themselves according to their administration as well as to the region in which their administrations function. Morocco reorganized from sixteen regions into twelve high administrative regions in 2015, as a new vision for sustainable development called *Advanced Regionalization*. Full information is given in the following chart, according to the statistics of the High Commissioner for Planning in 2014<sup>11</sup>.

<sup>10</sup>According to the Moroccan administrative flowchart.

<sup>11</sup>It is the Moroccan national statistics office in charge of macroeconomic data collection and analysis.



Figure 4.30: Moroccan map by regions

Table 4.2: Moroccan regions

Region	Population	Area(km <sup>2</sup> )
Beni Mellal-Khenifra	2,520,776	33,208
Casablanca-Settat	6,861,739	20,166
Dakhla-Oued Ed-Dahab	142,955	142,865
Draa-Tafilalet	1,635,008	105,383
Fes-Meknes	4,236,892	47,705
Guelmim-Oued Noun	433,757	64,473
Laayoune-Sakia al Hamra	367,758	121,219
Oriental	2,314,346	82,820
Marrakech-Safi	4,520,569	38,445
Rabat-Sale-Kenitra	4,580,866	18,385
Souss-Massa	2,676,847	51,642
Tanger-Tetouan-Al Hoceima	3,556,729	15,090

Source: High Commissioner for Planning in 2014.

The Questionnaire link was spread by the ministries throughout their database to the users of the GID system in the country. However, only  $n=198$  officers responded to my online questionnaire, where 55 servants returned the filled questionnaires in paper version. The statistics indicate that the researcher received 25.7% of the responses from the region of Fes-Meknes, which is the highest degree of response. 14.2% of the respondents, who filled the survey, belong to capital region-Rabat-Sale-Kenitra, where the majority of ministries and administrations are based. Whilst, the questionnaire received only 3.2% from the regions of the South, namely Laayoune-Sakia El Hamra and Dakhla-Oued Ed Dahab, respectively. The

other regions responses vary between 5% and 9% , as indicated in figure 4.31, accordingly.

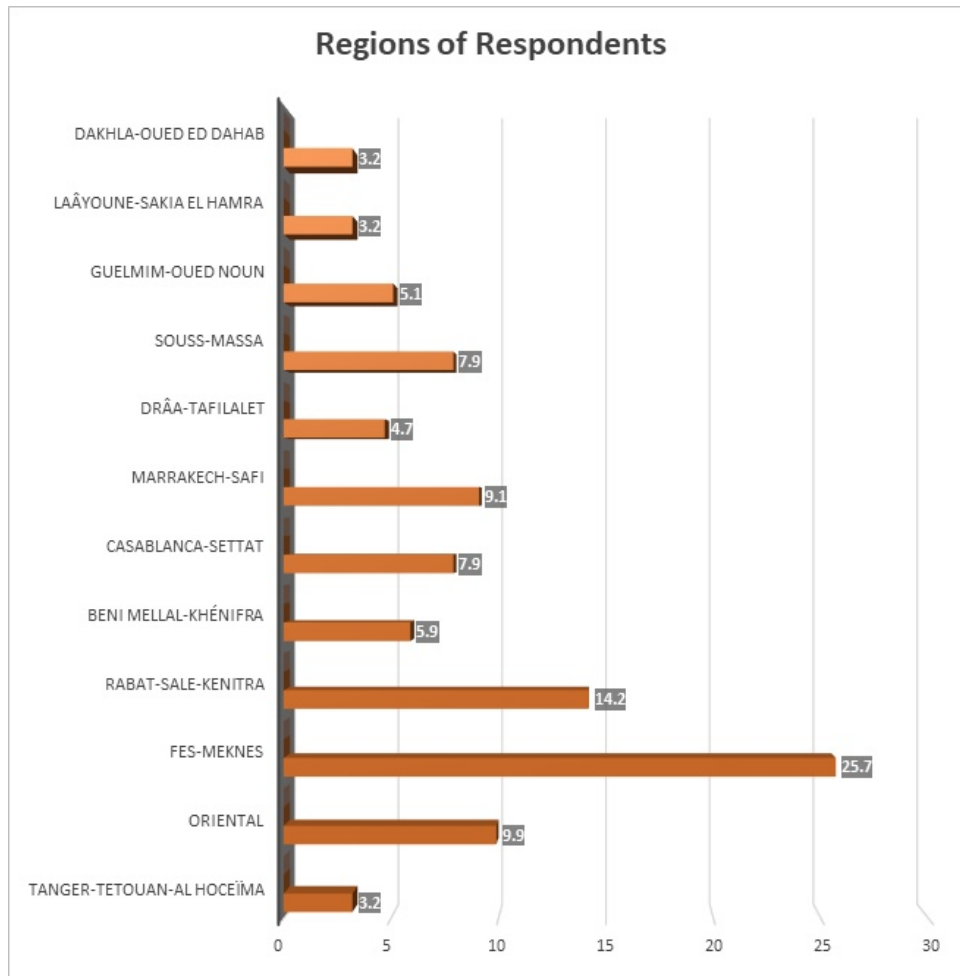


Figure 4.31: Distribution of respondents by region

## 4.3 Quantitative Analysis

### 4.3.1 Exploratory Factor Analysis (EFA)

Exploratory Factor Analysis is used by researchers to generate a basic explanation about the theory underlying the research framework in order to identify latent variables underlying the structure of the model, used in the study. EFA has the ability to partition item and variable variances into major components, according to the factor rotation, for an exploratory discovery of the data. On the other hand, Confirmatory Factor Analysis CFA can be used as a second test to see if the developed structure model works well, at the second time. It is possible to skip EFA as an initial discovery and proceed directly to the use of CFA, if the researcher feels that he developed a strong theoretical framework (Harrington, 2008) .

### 4.3.2 eGovWGA (Independent Variables)

#### KMO and Bartlett's Test

In the following study, the researcher feels the consistency of his developed structural model, but aims to test it beforehand using CFA test. In view of that, the researcher runs EFA on SPSS version 25 for the exogenous<sup>12</sup> and endogenous<sup>13</sup> variables to explore how many components are accommodating the used variables. A Principal Components Analysis (PCA) is used for factor examination, based on a promax rotation method, with an eigenvalue >1.0, to get these findings:

Table 4.3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	<b>0.877</b>
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	<b>1220.104</b>
	<b>28</b>
	<b>0.000</b>

Kaiser-Meyer-Olkin (KMO) excellent scores indicate how the data is suited for Factor Analysis. In this way, KMO sampling adequacy for each variable in both models and for the

<sup>12</sup>In path coefficient tests (regression), it is the variable which produces effect (Independent Variable).

<sup>13</sup>It is the variable which receives effect (Dependent Variable).

complete model. Kaiser-Meyer-Olkin measures the proportion of variance among variables that might show common variance. Hence, the lower the proportion is, the more the data is suited to Factor Analysis, according to the rule of thumb. In this way, the total significance of the correlation matrix is highly significant with a  $p$ -value of  $\leq 0.01$ , and a KMO value of 0.877, which suggest that the sample adequacy is highly acceptable.

### Component Matrix

Table 4.4: Component matrix

Items	Component 1	Component 2
EG2	1.022	
EG1	0.906	
EG3	0.756	
EG4	0.653	
EO2		0.935
EO4		0.859
EO3		0.854
EO1		0.486

The pattern matrix 4.4 indicates that EFA is grouping the eight variables into two main components, with a Kaiser value above 70%. Obviously, Exploratory Factor Analysis reduces the eight variables into two major components *eIntegration* and *eInteroperability*, in which Component 1 (eIntegration) explains approximately 60% of the occurring variance, where Component 2 (eInteroperability) explains only 13.5 % of variance, as specified by the total variance explained in the chart 4.5, below.

### Total Variance Explained

Table 4.5: Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.788	59.846	59.846	4.788	59.846	59.846	4.133
2	1.088	13.596	73.442	1.088	13.596	73.442	3.952
3	0.538	6.731	80.173				
4	0.423	5.293	85.466				
5	0.38	4.752	90.219				
6	0.327	4.091	94.31				
7	0.271	3.391	97.7				
8	0.184	2.3	100				

Extraction Method:  
Principal Component Analysis.

### Scree Plot

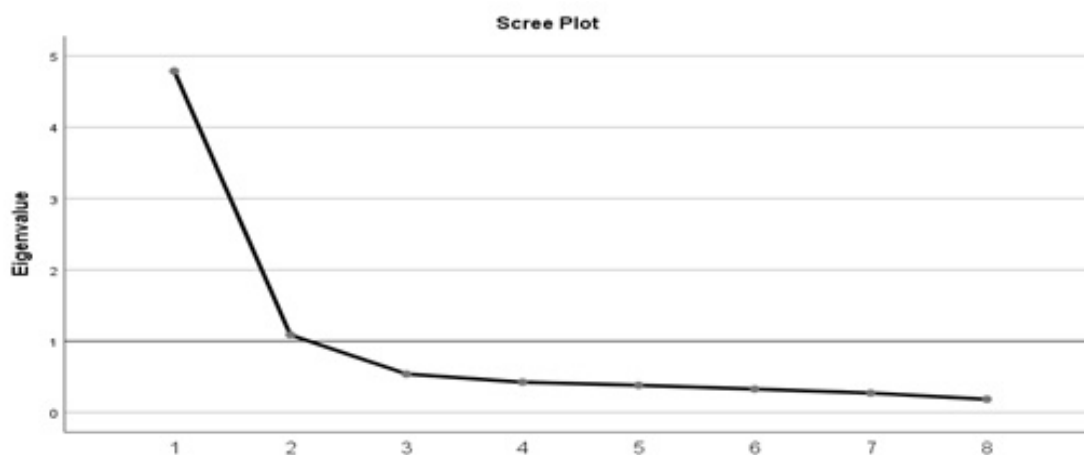


Figure 4.32: Scree plot eGovWGA

EFA with a promax rotation extracted a very clear two-factor structure along the line curving on the eigenvalues >1, just as it is described by the scree plot above. Hence, EFA reveals that the eight items load perfectly to their components *eIntegration* and *eInteroperability* which constitute in turn the *eGovWGA* (the umbrella factor) as designed by the researcher in his measurement model.

### 4.3.3 Good Governance (Dependent Variables)

#### KMO and Bartlett's Test

Table 4.6: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	<b>0.945</b>		
Bartlett's Test of Sphericity	Approx. Chi-Square	1943.027	
	df	66	
	Sig.	<b>0.00</b>	

The total significance of the correlation matrix is highly significant with 0 error probability (  $p$ -value = 0.00), with a very high Kaiser-Meyer-Olkin score (KMO = 0.945), suggesting a high adequacy of the measurement sampling.

### Component matrix

Table 4.7: Component matrix

	Component 1
Decentralization	0.694
Efficiency and Effectiveness	0.763
Cost effectiveness	0.794
Transparency	0.739
Accountability	0.714
Participation	0.812
Responsiveness	0.822
Strategic Vision	0.689
Administrative Simplification	0.803
Seamless Coordination	0.809
Data and information Security	0.793
Rule of law	0.772

Extraction Method: Principal Component Analysis. 1 components extracted.

The Component matrix 4.7 indicates that EFA groups the twelve variables into one and only main component of *Good Governance* (umbrella factor), with a high Kaiser-Meyer-Olkin score (KMO = 0.945) and with high significance at ( $p$ -value = 0.00). Therefore, EFA reduces the twelve variables into one major component *Good Governance*, which explains approximately 60% of the occurring variance, as specified in table 4.8, below.

### Total Variance Explained

Table 4.8: Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.084	59.030	59.030	7.084	59.030	59.030
2	0.844	7.034	66.065			
3	0.728	6.065	72.130			
4	0.562	4.687	76.817			
5	0.519	4.324	81.141			
6	0.452	3.768	84.910			
7	0.383	3.190	88.100			
8	0.356	2.970	91.070			
9	0.328	2.731	93.801			
10	0.276	2.302	96.102			
11	0.253	2.106	98.208			
12	0.215	1.792	100.000			

Extraction Method: Principal Component Analysis.

### Scree Plot

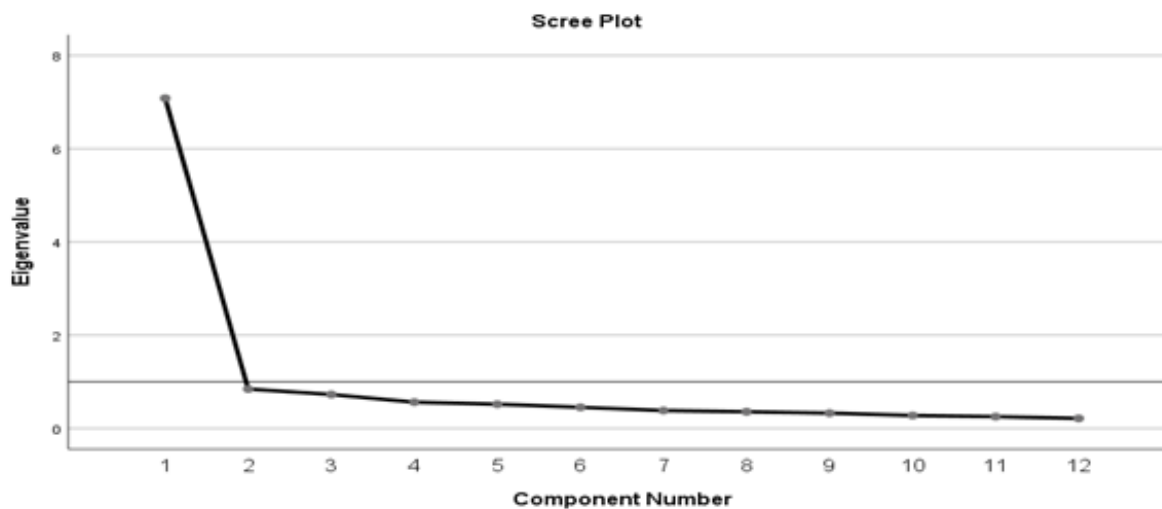


Figure 4.33: Scree plot good governance

EFA generates 12 variables, that shadow *Good Governance* as indicated by scree plot in figure 4.33 and table 4.8. EFA with a promax rotation extracts a very clear one-factor structure along the line curving on eigenvalue  $>1$ , just as it is described by the scree plot above. Hence, EFA reveals that the twelve variables load perfectly to one construct *Good Governance*, at the end, which is the umbrella factor as designed by the researcher in his measurement model.

## 4.4 Measurement Model Evaluation

The exploratory design of the study entails an assessment for its measurement, in the sense that convergent and discriminant validities will be examined, after content validity. In other words, the assessment of the measurement model will answer the question whether the reflective used items/indicators do really reflect their constructs or not, as the formative items do when they form their constructs. This assessment will enable the researcher to confirm the theoretical measurement fit with reality, especially when the measurement draws a complex model with multiple items and constructs to assess a phenomenon. The measurement is exhibited to some degree of error to measure reality, especially if the survey questions are misunderstood or poorly worded by the respondents.

Structural Equation Modeling SEM precisely evaluates assessment models carried out by researchers for error identification. Indeed, SEM/CFA is a second generation statistical technique that combines factor analysis and regression different approaches to investigate the theorized relations between the items (outer loadings) and their constructs (latent variables) or between the constructs themselves, using PLS-SEM (Hair et al., 2013). *PLS*<sup>3</sup> software contains three techniques on its menu, namely Centroid<sup>14</sup>, Factor analysis and path modeling. In this research, factor analysis will be used first to confirm the explored measurement model, which assumes that all the items are loading to their latent constructs perfectly. SEM is a statistical technique that investigates the extent to which the designed model/survey captures reality, based on factor loadings, convergent and discriminant validity. The assessment of the measurement model (outer model) is an important package of statistical tests, used to rectify data, remove low loading items from the scale to rise composite reliability and Average Extracted Values (AVE) of the latent variables. Briefly speaking, measurement model validation is a pivotal requirement for the measurement of inner predictive/causal constructs relationships, carried in the structural model evaluation (Hair, Hult, Ringle, & Sarstedt, 2017).

#### 4.4.1 Convergent Validity

According to Hair et al. (2017), researchers have to look at: the model constructs, item loadings on their constructs and the average variance extracted (AVE) scores together in order to confirm the Convergent Validity of their measurement model. To be brief, the items used in the questionnaire should load by values  $> 0.70$  to explain their measuring constructs with a Composite Reliability (CR)  $> 0.70$ , and with Average Variance Extracted values (AVE) scores  $> 0.50$ , so as to validate the Convergent Validity of the scale at the end. In this direction, the scale of the following study underwent a firm package of statistical tests in order to confirm its convergent and discriminant validity together, before Path Analysis.

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<sup>14</sup>A statistical technique on PLS which calculates a sequence of regressions in terms of weight vectors to provide the highest  $R^2$  values for endogenous latent variables (Hair et al., 2013).

**Table 4.9: Convergent Validity (eGovWGA factors)**

Item indicators	Type of measure	Item loadings	CR	Cronbach alpha	AVE	Convergent Validity
eIntegration	Reflective		0.891	0.925	0.755	Confirmed
EG1		0.875				
EG2		0.872				
EG3		0.868				
EG4		0.860				
eInteroperability	Reflective		0.849	0.899	0.690	Confirmed
EG1		0.733				
EG2		0.833				
EG3		0.871				
EG4		0.843				

**Table 4.10: Convergent Validity (Good Governance factors)**

Item indicators	Type of Measure	Item Loadings	CR	Cronbach Alpha	AVE	Convergent Validity
Accountability	Reflective		0.876	0.811	0.639	Confirmed
	A1	0.834				
	A2	0.806				
	A3	0.785				
	A4	0.771				
Administrative Simplification	Reflective		0.905	0.86	0.704	Confirmed
	AS1	0.864				
	AS2	0.834				
	AS3	0.802				
	AS4	0.855				
Cost effectiveness	Reflective		0.875	0.81	0.637	Confirmed
	CE1	0.807				
	CE2	0.787				
	CE3	0.79				
	CE4	0.808				
Decentralization	Reflective		0.87	0.801	0.627	Confirmed
	D1	0.728				
	D2	0.821				
	D3	0.799				
	D4	0.816				
Data and Information security	Reflective		0.898	0.848	0.688	Confirmed
	DIS1	0.857				
	DIS2	0.806				
	DIS3	0.872				
	DIS4	0.779				
Efficiency and Effectiveness	Reflective		0.864	0.79	0.614	Confirmed
	EE1	0.779				
	EE2	0.716				
	EE3	0.786				
	EE4	0.83				
Participation	Reflective		0.888	0.831	0.644	Confirmed
	P1	0.776				
	P2	0.822				
	P3	0.826				
	P4	0.836				
Responsiveness	Reflective		0.879	0.816	0.645	Confirmed
	R1	0.767				
	R2	0.825				
	R3	0.815				
	R4	0.805				
Rule of Law	Reflective		0.888	0.832	0.665	Confirmed
	RL1	0.843				
	RL2	0.833				
	RL3	0.82				
	RL4	0.763				
Seamless Coordination	Reflective		0.908	0.864	0.711	Confirmed
	SC1	0.862				
	SC2	0.829				
	SC3	0.819				
	SC4	0.863				
Strategic Vision	Reflective		0.91	0.868	0.716	Confirmed
	SV1	0.835				
	SV2	0.85				
	SV3	0.853				
	SV4	0.846				
Transparency	Reflective		0.824	0.716	0.54	Confirmed
	T1	0.764				
	T2	0.648				
	T3	0.758				
	T4	0.764				

### 4.4.2 Individual Item Reliability (Item Loadings)

According to Hair et al. (2017), the indicator's outer loadings should explain a substantial part of each indicator's variance, usually by 70%. In other words, all the loadings must be scored at higher than the minimum value of 0.70. However, item loadings between 0.6 and 0.7 are also acceptable in exploratory studies, when the constructs and items are designed for the first time. However, the loadings higher than 0.70 are recommend. Tables 4.10 and 4.9 indicate that the model, used in this study, succeeded the first exam since the reflectively constructed items<sup>15</sup> surpass the required rule of thumb ( $> 0.70$ ), put by Hair et al. (2017).

### 4.4.3 Composite Reliability

Composite Reliability (CR) in PLS-SEM is similar to Cronbach's alpha. It measures the internal consistency reliability, according to the outer loadings of the variables, low composite reliability scores explain item redundancy that can have an indirect negative effect on measurement model validity, in turn. Therefore, CR below 0.60 indicates a poor internal consistency reliability. However, values of 0.60 to 0.70 are generally acceptable for exploratory designs. Consistency reliability values between 0.70 and 0.90 are recommended, where values above 0.95 are not desired in research, indicating redundancy in the measurement model, according to Hair et al. (2017). Accordingly, tables 4.9 and 4.10 along with their figures 4.34 and 4.35 indicate that Composite Reliability is perfectly significant, since all the constructs load with high scores between 0.70 and 0.95.

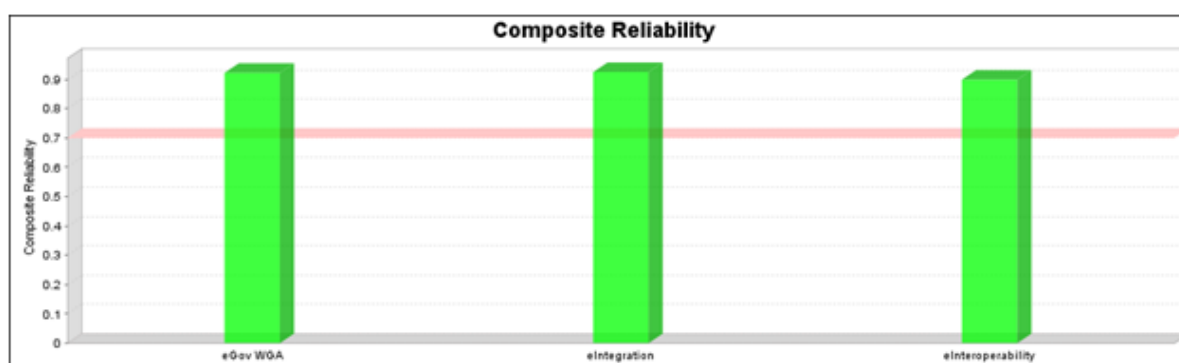


Figure 4.34: Composite Reliability (eGovWGA factors)

<sup>15</sup>Outer loadings on the model, refer to figures 4.38 and 4.39.

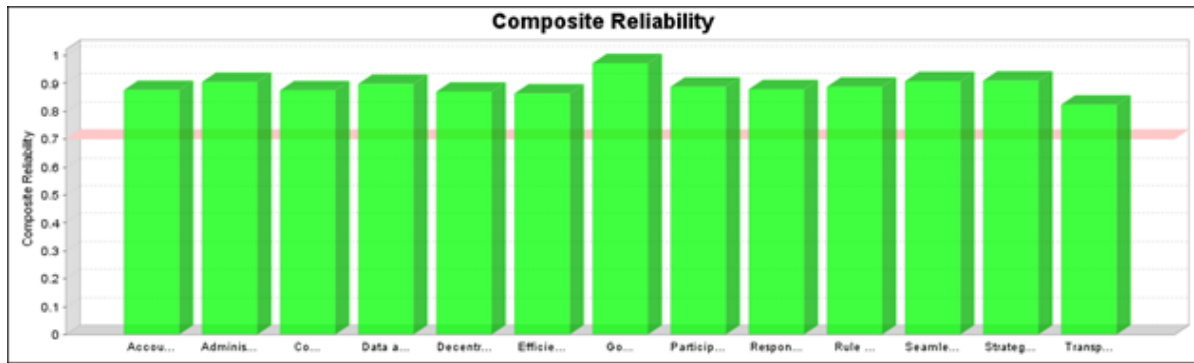


Figure 4.35: Composite Reliability (Good Governance factors)

#### 4.4.4 Average Variance Extracted (AVE)

The Average Variance Extracted (AVE) is a meticulous indicator for Convergent Validity. It is the sum of the Squared Item Loadings divided by the number of items used for a construct. AVE on PLS-SEM is equal to the Communality of a construct calculated by SPSS or Amos. Good loadings must reflect significant AVEs of constructs, which are desired at the minimum level of 0.50. Thus, the measures of the three reflective constructs have high levels of convergent validity. Equally, an AVE of less than 0.50 shows that error is still not reduced on the items. Low AVE scores push researchers to revise their item scores for removal from the scale if they can increase their AVEs with significant reliability (Hair et al., 2017). Effectively, all the constructs reflect a high level of AVE, when the scores marked above 0.690, as indicated respectively by the tables 4.9 and 4.10 and their figures 4.36 and 4.37, respectively.

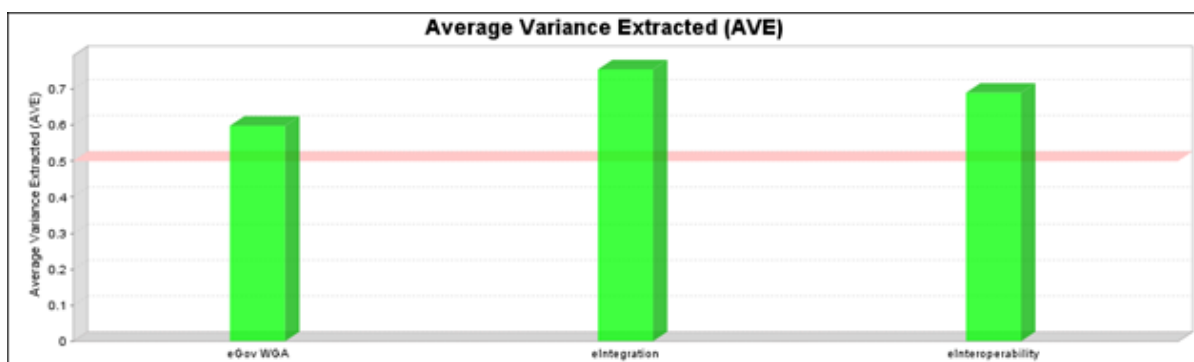


Figure 4.36: AVEs (eGovWGA factors)

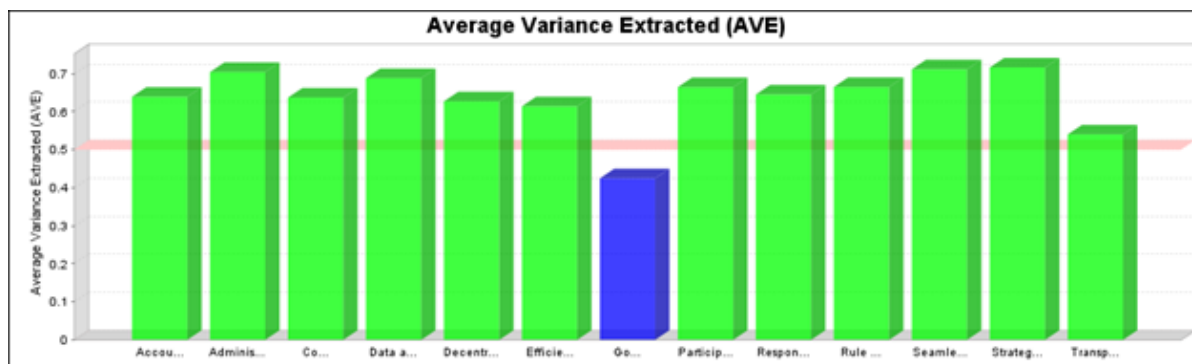


Figure 4.37: AVEs (Good Governance factors)

In conclusion, the exogenous factors and their items, constructed reflectively for this measurement model do highly confirm a good degree of Convergent Validity, as suggested by Hair et al.(2017).

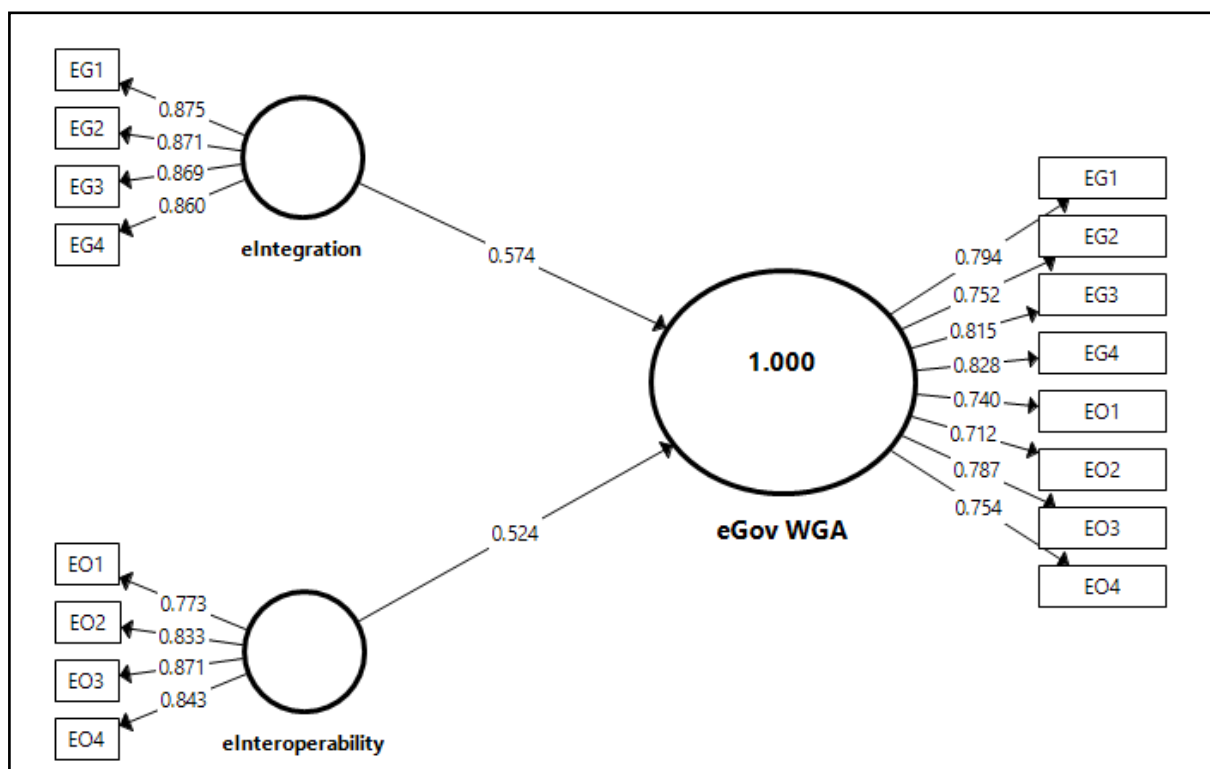


Figure 4.38: Measurement model for exogenous factors

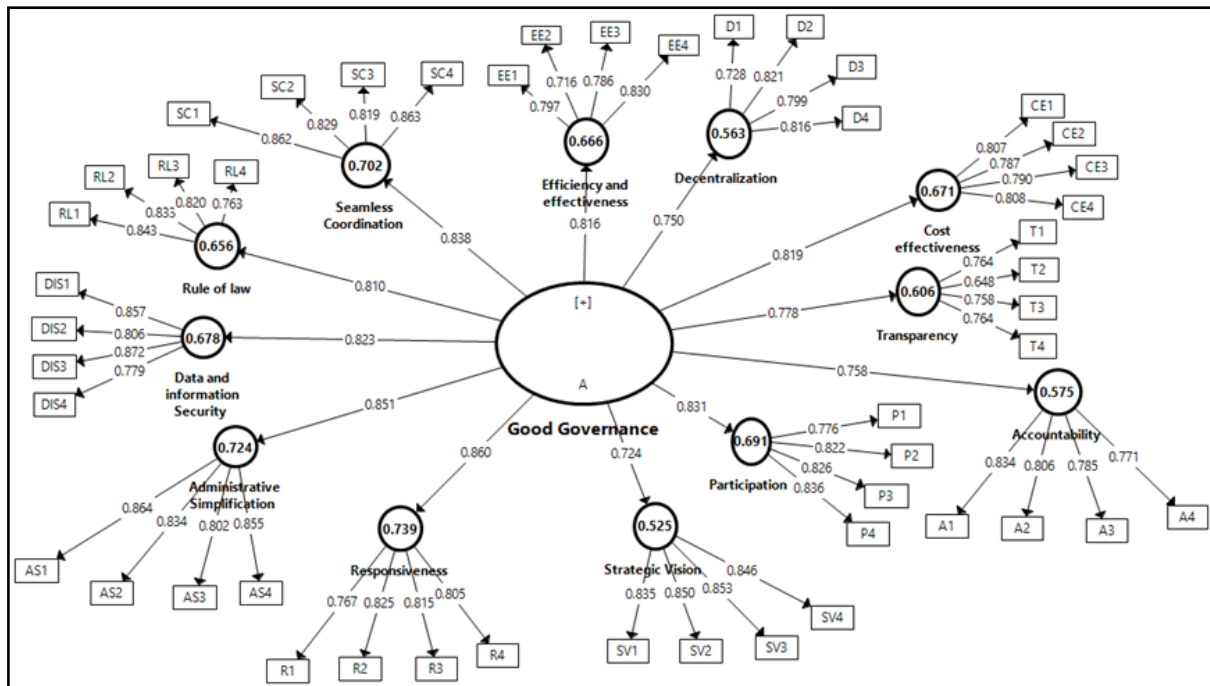


Figure 4.39: Measurement model for endogenous factors

#### 4.4.5 Discriminant Validity

Discriminant Validity measures the distinction between the constructs of the model, by empirical standards. Researchers do establish Discriminant Validity so as to see the extent to which each construct can be unique in measuring and capturing its inquiry, which should not be measured by any other construct or item, on the same model (Hair et al., 2017). In other words, Cross-Loading is the first test to go through for Discriminant Validity of the scale. According to Hair et al. (2017), discriminant validity is confirmed when the items of the questionnaire (outer loadings) load highly on their own constructs more than they can load to any other construct on the same model. In this way, the item must load on its own construct with the highest value that it can load with on any other construct, at the same model. Therefore, Cross-Loading Test is a first condition to confirm Discriminant Validity of the model.

Fornell-Larcker measurement is the second coming test for discriminant validity of the scale. It calculates the AVE square root values of the measured latent variable correlations together in one table. Indeed,  $PLS^3$  has the power to squareroot all the AVEs of the measured constructs, to assess how latent variables do highly correlate with themselves

better more than they can correlate with any other variable on the same model. In this logic, researchers determine to what extent their built variables do share more variance in relation with their items, on a single model. Likewise, the items and constructs of the measurement scale underwent a meticulous check of Cross Loadings and Fornell-Larcker correlations for their discriminant validity, before Path Analysis.

#### 4.4.6 Cross Loadings Test

##### eGovWGA Cross Loadings

Table 4.11: eGovWGA Cross loading (Outer loadings)

Constructs	eIntegration	eInteroperability
Items		
EG1	<b>0.875</b>	0.557
EG2	<b>0.872</b>	0.482
EG3	<b>0.868</b>	0.605
EG4	<b>0.86</b>	0.637
EO1	0.584	<b>0.773</b>
EO2	0.479	<b>0.833</b>
EO3	0.576	<b>0.871</b>
EO4	0.544	<b>0.843</b>

##### Good Governance Cross Loadings

Table 4.12: Good Governance cross loadings (Outer loadings)

Constructs Items	A	AS	CE	DIS	D	EE	P	R	RL	SC	SV	T
A1	<b>0.83</b>	0.44	0.44	0.52	0.4	0.53	0.52	0.5	0.45	0.47	0.43	0.61
A2	<b>0.81</b>	0.42	0.38	0.5	0.33	0.44	0.44	0.46	0.45	0.49	0.4	0.53
A3	<b>0.79</b>	0.45	0.44	0.48	0.4	0.51	0.49	0.54	0.4	0.47	0.41	0.56
A4	<b>0.77</b>	0.47	0.44	0.45	0.36	0.45	0.49	0.5	0.52	0.56	0.36	0.49
AS1	0.47	<b>0.86</b>	0.61	0.59	0.54	0.57	0.58	0.65	0.57	0.68	0.53	0.49
AS2	0.43	<b>0.83</b>	0.61	0.54	0.54	0.48	0.57	0.58	0.57	0.62	0.47	0.42
AS3	0.5	<b>0.8</b>	0.56	0.58	0.49	0.52	0.57	0.64	0.57	0.62	0.46	0.45
AS4	0.47	<b>0.86</b>	0.59	0.57	0.52	0.52	0.59	0.59	0.55	0.65	0.45	0.43
CE1	0.41	0.54	<b>0.81</b>	0.47	0.51	0.6	0.51	0.56	0.45	0.51	0.39	0.47
CE2	0.41	0.59	<b>0.79</b>	0.49	0.55	0.52	0.55	0.58	0.48	0.42	0.44	0.48
CE3	0.43	0.54	<b>0.79</b>	0.42	0.5	0.52	0.54	0.48	0.38	0.43	0.31	0.37
CE4	0.44	0.58	<b>0.81</b>	0.59	0.52	0.66	0.67	0.64	0.48	0.55	0.46	0.56
D1	0.31	0.46	0.43	0.39	<b>0.73</b>	0.45	0.41	0.44	0.44	0.44	0.34	0.47
D2	0.33	0.51	0.53	0.47	<b>0.82</b>	0.53	0.47	0.51	0.38	0.42	0.35	0.44
D3	0.37	0.4	0.51	0.37	<b>0.8</b>	0.53	0.47	0.47	0.41	0.37	0.31	0.44
D4	0.46	0.57	0.58	0.54	<b>0.82</b>	0.55	0.55	0.55	0.48	0.51	0.42	0.48
DIS1	0.54	0.61	0.54	<b>0.86</b>	0.46	0.49	0.48	0.56	0.6	0.66	0.5	0.54
DIS2	0.5	0.48	0.44	<b>0.81</b>	0.35	0.46	0.38	0.46	0.53	0.58	0.39	0.49
DIS3	0.52	0.61	0.55	<b>0.87</b>	0.53	0.58	0.54	0.61	0.61	0.59	0.5	0.57
DIS4	0.47	0.55	0.52	<b>0.78</b>	0.51	0.55	0.52	0.56	0.56	0.48	0.42	0.54
EE1	0.51	0.49	0.55	0.52	0.5	<b>0.8</b>	0.53	0.58	0.46	0.43	0.4	0.6
EE2	0.49	0.37	0.51	0.49	0.48	<b>0.72</b>	0.41	0.49	0.37	0.38	0.36	0.41
EE3	0.44	0.57	0.59	0.48	0.56	<b>0.79</b>	0.55	0.6	0.47	0.51	0.39	0.49
EE4	0.46	0.51	0.62	0.49	0.51	<b>0.83</b>	0.59	0.57	0.47	0.44	0.51	0.5
P1	0.58	0.52	0.53	0.44	0.45	0.47	<b>0.78</b>	0.55	0.45	0.45	0.47	0.47
P2	0.41	0.6	0.61	0.47	0.5	0.54	<b>0.82</b>	0.57	0.46	0.51	0.45	0.46
P3	0.54	0.56	0.57	0.51	0.49	0.57	<b>0.83</b>	0.64	0.48	0.57	0.5	0.51
P4	0.46	0.56	0.62	0.47	0.52	0.6	<b>0.84</b>	0.65	0.54	0.47	0.53	0.57
R1	0.58	0.55	0.54	0.59	0.5	0.59	0.58	<b>0.77</b>	0.44	0.51	0.46	0.53
R2	0.54	0.57	0.61	0.55	0.53	0.56	0.59	<b>0.83</b>	0.5	0.48	0.42	0.51
R3	0.42	0.62	0.6	0.47	0.51	0.57	0.57	<b>0.82</b>	0.57	0.54	0.5	0.47
R4	0.47	0.61	0.54	0.52	0.47	0.58	0.64	<b>0.81</b>	0.51	0.56	0.49	0.44
RL1	0.48	0.63	0.58	0.62	0.54	0.56	0.56	0.57	<b>0.84</b>	0.62	0.5	0.57
RL2	0.52	0.59	0.48	0.61	0.48	0.52	0.52	0.54	<b>0.83</b>	0.68	0.52	0.56
RL3	0.44	0.53	0.37	0.53	0.33	0.41	0.42	0.47	<b>0.82</b>	0.65	0.46	0.44
RL4	0.41	0.44	0.37	0.5	0.39	0.33	0.4	0.46	<b>0.76</b>	0.56	0.43	0.4
SC1	0.49	0.67	0.51	0.61	0.48	0.46	0.52	0.53	0.67	<b>0.86</b>	0.51	0.54
SC2	0.53	0.64	0.49	0.57	0.48	0.47	0.51	0.52	0.63	<b>0.83</b>	0.47	0.52
SC3	0.59	0.64	0.51	0.58	0.45	0.5	0.52	0.58	0.61	<b>0.82</b>	0.47	0.48
SC4	0.48	0.64	0.51	0.58	0.46	0.47	0.53	0.56	0.68	<b>0.86</b>	0.59	0.47
SV1	0.44	0.5	0.43	0.49	0.38	0.48	0.5	0.52	0.52	0.57	<b>0.84</b>	0.45
SV2	0.42	0.43	0.35	0.48	0.29	0.38	0.45	0.44	0.49	0.49	<b>0.85</b>	0.38
SV3	0.43	0.53	0.49	0.44	0.41	0.48	0.57	0.51	0.5	0.52	<b>0.85</b>	0.49
SV4	0.41	0.45	0.43	0.46	0.43	0.46	0.51	0.49	0.48	0.47	<b>0.85</b>	0.45
T1	0.44	0.36	0.49	0.46	0.39	0.45	0.43	0.44	0.41	0.47	0.31	<b>0.76</b>
T2	0.52	0.35	0.28	0.53	0.28	0.37	0.28	0.34	0.37	0.38	0.32	<b>0.65</b>
T3	0.46	0.42	0.51	0.45	0.52	0.52	0.54	0.47	0.52	0.49	0.39	<b>0.76</b>
T4	0.6	0.44	0.45	0.48	0.48	0.53	0.52	0.51	0.48	0.4	0.51	<b>0.76</b>

The tables 4.11 and 4.12 manifest endogenous and exogenous cross-loadings in the studied model, respectively. The results illustrate that all the cross-loadings do not exceed the items outer loadings on their constructs, on the same model. For example, the four items (EG1, EG2, EG3, EG4) loadings on their construct *eIntegration* surpass their cross-loadings on *eInteroperability*. Therefore, the items cannot cross-measure each other. In this logic, all the endogenous and exogenous items loaded highly on their constructs more than they can load on other constructs, as indicated in both tables 4.11 and 4.12, above. Consequently, all the constructs cross-loadings suggest that *Discriminant Validity* is statistically significant, according to the rule of thumb, put by Hair et al. (2017).

#### 4.4.7 Fornell-Larcker Correlation Test

##### eGovWGA Constructs

Table 4.13: eGovWGA correlation matrix

Constructs	eIntegration	eInteroperability
eIntegration	<b>0.869</b>	
eInteroperability	0.659	<b>0.831</b>

##### Good Governance Constructs

Table 4.14: Good Governance variables correlation matrix

Variable correlation	A	AS	CE	DIS	D	EE	P	R	RL	SC	SV	T
Accountability	<b>0.8</b>											
Administrative Simplification	0.555	<b>0.839</b>										
Cost effectiveness	0.532	0.705	<b>0.798</b>									
Data & information Security	0.61	0.679	0.622	<b>0.829</b>								
Decentralization	0.469	0.619	0.647	0.562	<b>0.792</b>							
Efficiency & effectiveness	0.605	0.623	0.726	0.628	0.654	<b>0.784</b>						
Participation	0.61	0.687	0.715	0.579	0.601	0.668	<b>0.815</b>					
Responsiveness	0.624	0.734	0.712	0.663	0.627	0.716	0.741	<b>0.803</b>				
Rule of law	0.571	0.676	0.56	0.696	0.541	0.569	0.591	0.629	<b>0.815</b>			
Seamless Coordination	0.619	0.764	0.599	0.696	0.554	0.565	0.617	0.652	0.77	<b>0.843</b>		
Strategic Vision	0.501	0.568	0.503	0.55	0.448	0.532	0.599	0.581	0.586	0.604	<b>0.846</b>	
Transparency	0.684	0.534	0.595	0.645	0.579	0.644	0.615	0.605	0.61	0.593	0.524	<b>0.735</b>

Fornell-Larcker checks upon the reflectively-constructed variables correlations with other constructs on the same measurement model. Fornell-Larcker is an intelligent test

that calculates the square root of each construct's AVE, in correlation with all the other constructs on the same model, which must score highly when each construct is correlated with itself on the matrix. In this model, the Fornell-Larcker correlations are statistically significant, as the variables do highly correlate with themselves more than they can correlate with any other variables or items on the same model, as indicated by matrices: 4.13 and 4.14. Therefore, the Convergent and Discriminant Validities of the scale are confirmed together. Hence, the explored scale of the study is valid and reliable for Structural Equation Modeling.

## 4.5 Structural Model Evaluation

Now, the researcher has a clean, valid and reliable measurement models (figures 4.39 and 4.38) to test the causal relationship between reflective exogenous and endogenous variables on the scale, using PLS-SEM or path analysis. In this way, the models will be merged into one diagram on Smart PLS<sup>3</sup> to examine the hypothesized effect relationships between variables, as put in methodology.

These relationships will be examined drawing arrows between the constructs, through Partial Least Squares Structural Equation Modeling (PLS-SEM), based on multiple regression analysis between different factors and groups at once. The process of regression is carried by PLS with complex assumptions that will give value and accuracy to the study, more than any first-generation statistical test (Hair et al., 2017).

### 4.5.1 Path Coefficient – Hypotheses Test

Structural model path coefficients test is used to calculate causal effects among exogenous and endogenous variables, as being hypothesized by the researcher in the study. Path coefficient results are explained similarly as they are explained in multiple regression analysis, calculated by SPSS. According to the rule of thumb, put by Hair et al. (2017), the hypothesized effects extracted from PLS-SEM could be explained in the following case equation if the condition of probability (**p-value <0.05**) is met in parallel:

$$\left. \begin{array}{l} \beta > (0.50), \text{ closer to } (+1) = \text{Strong Effect} \\ \beta < (0.50), \text{ closer to } (-1) = \text{Negative Effect} \end{array} \right\} \text{ if } p\text{-value} < 0.05$$

Tables 4.15 and 4.16 are report summaries of the hypothesized causal effects between exogenous and endogenous variables in the first studied model, using Structural Equation Modeling.

### eGovWGA effect on Good Governance

Table 4.15: eGovWGA effect on Good Governance variables

Effect path	St.Beta ( $\beta$ )	St.Deviation	t-value	p-values	Decision
eGov WGA → Accountability	<b>0.611</b>	0.071	8.645	<b>0.00</b>	Supported**
eGov WGA → Administrative Simplification	<b>0.639</b>	0.049	13.044	<b>0.00</b>	Supported**
eGov WGA → Data Info Security	<b>0.721</b>	0.055	13.048	<b>0.00</b>	Supported**
eGov WGA → Decentralization	<b>0.593</b>	0.064	9.221	<b>0.00</b>	Supported**
eGov WGA → Efficiency and Effectiveness	<b>0.587</b>	0.072	8.167	<b>0.00</b>	Supported**
eGov WGA → Participation	<b>0.559</b>	0.063	8.886	<b>0.00</b>	Supported**
eGov WGA → Responsiveness	<b>0.67</b>	0.05	13.47	<b>0.00</b>	Supported**
eGov WGA → Rule of Law	<b>0.611</b>	0.054	11.38	<b>0.00</b>	Supported**
eGov WGA → Seamless Coordination	<b>0.724</b>	0.042	17.084	<b>0.00</b>	Supported**
eGov WGA → Strategic Vision	<b>0.463</b>	0.063	7.4	<b>0.00</b>	Supported**
eGov WGA → Transparency	<b>0.612</b>	0.07	8.746	<b>0.00</b>	Supported**
eGov WGA → Cost Effectiveness	<b>0.639</b>	0.045	14.286	<b>0.00</b>	Supported**

Table 4.16: eGovWGA variables effects on Good Governance

Effect Path	St.Beta ( $\beta$ )	Std.Deviation	t-value	p-value	Decision
eIntegration → eGov WGA	<b>0.57</b>	0.023	24.863	<b>0.00</b>	Supported**
eInteroperability → eGov WGA	<b>0.52</b>	0.013	41.284	<b>0.00</b>	Supported**
eGov WGA → Good Governance	<b>0.76</b>	0.048	15.909	<b>0.00</b>	Supported**

The Path Coefficient table 4.16 indicates that there is a highly significant ( $p$ -value = 0.00) and positive effect ( $\beta = 0.76$ ) of eGovernment Whole-of-Government Approach on Good Governance in public administration, the effect path approaches to (+1), as explained in histogram 4.42. Hence, **H<sub>1</sub> is accepted**.

Tables 4.15 and 4.16 indicate that all the path effects are significantly positive, except for the effect of eGovWGA on Strategic Vision, which is a bit critical ( $\beta = 0.463, p$ -value =

0.00), where all the other effects overpass the rule of thumb, put by Hair et al. (2017). The hypothesized path effects are explained by the path coefficients histograms below, as they are extracted from PLS, as all the  $\beta$  values approach to (+1), being also highly significant with two stars, as ( $p$ -values = 0.00) indicate, accordingly.

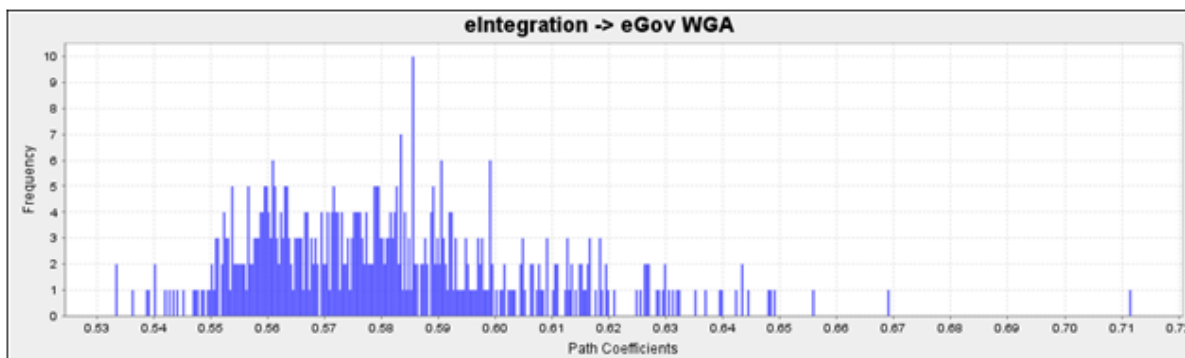


Figure 4.40: eIntegration effect on eGovWGA

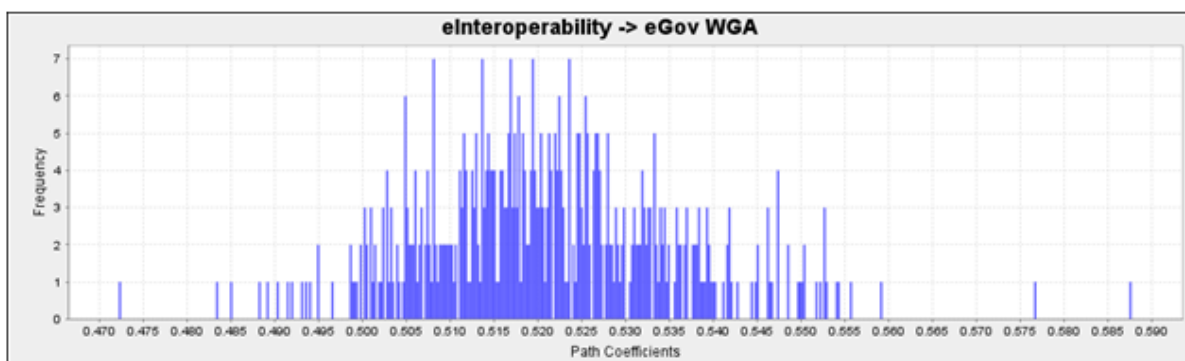


Figure 4.41: eInteroperability effect on eGovWGA

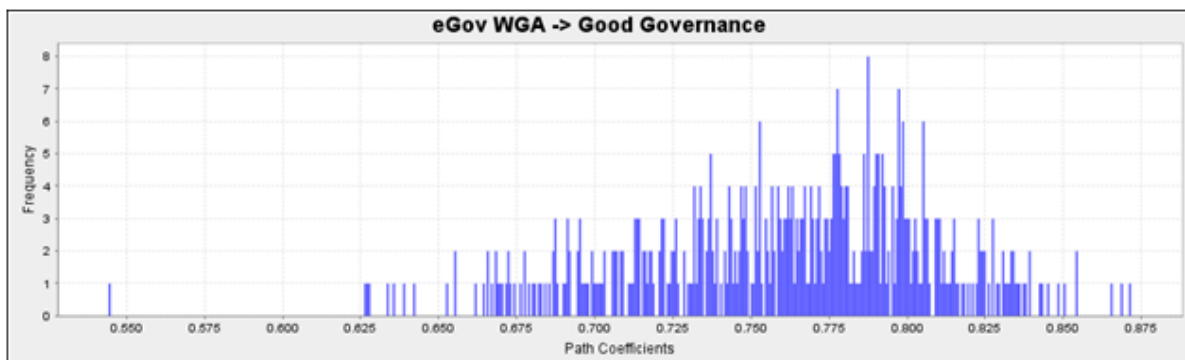


Figure 4.42: eGovWGA effect on Good Governance



Figure 4.43: eGovWGA effect on Accountability

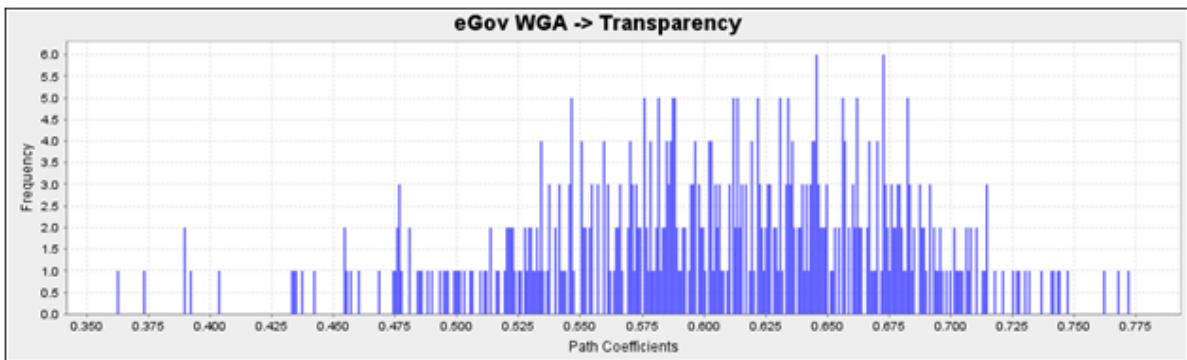


Figure 4.44: eGovWGA effect on Transparency

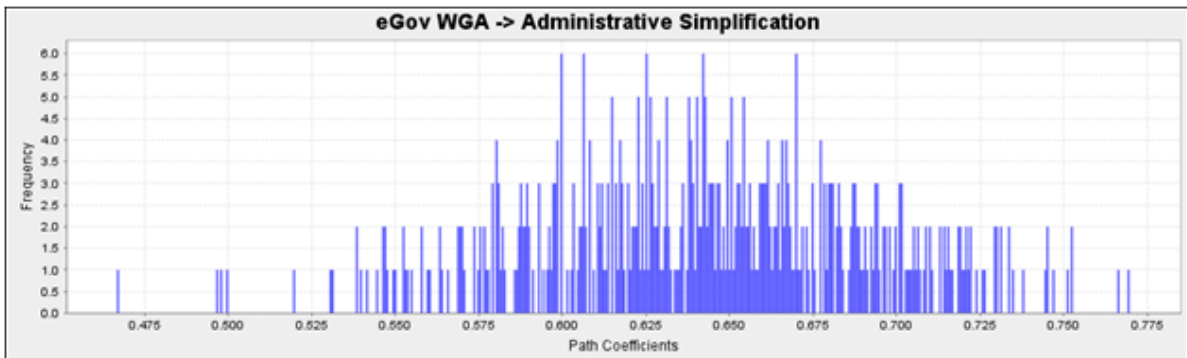


Figure 4.45: eGovWGA effect on Administrative Simplification

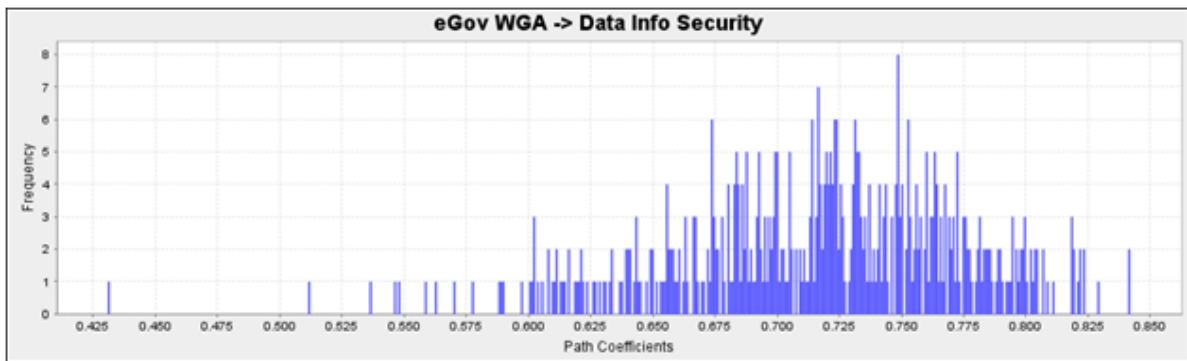


Figure 4.46: eGovWGA effect on Data and Info Security

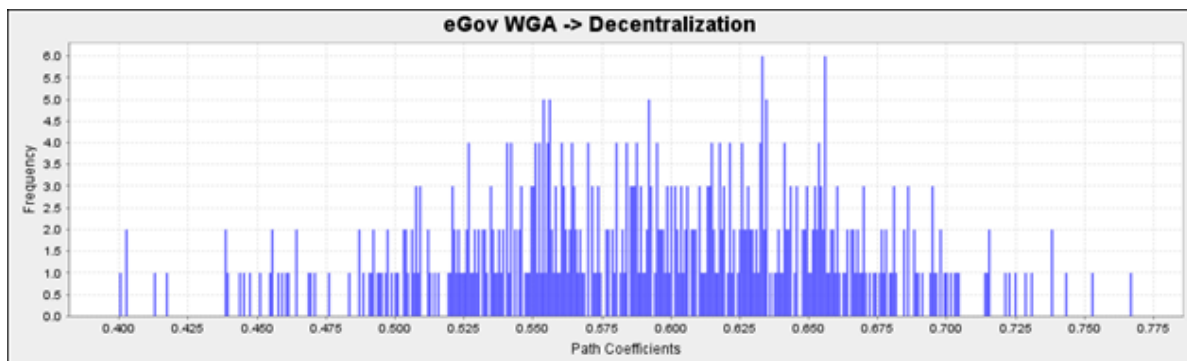


Figure 4.47: eGovWGA effect on Decentralization

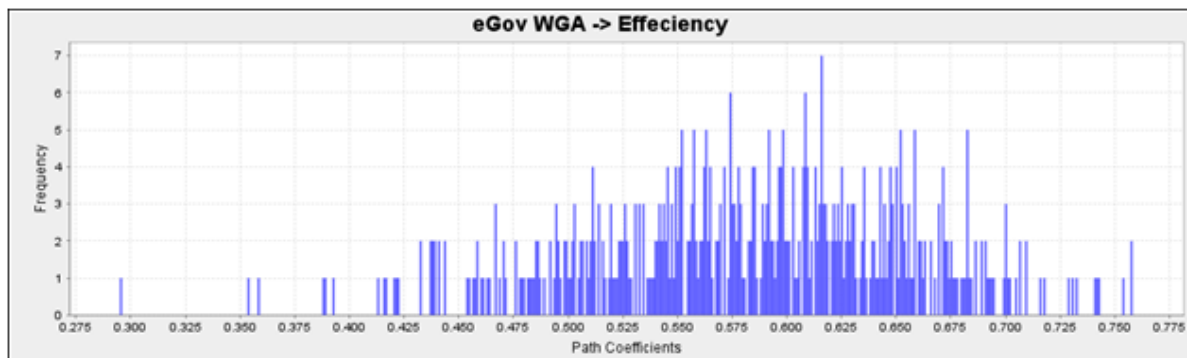


Figure 4.48: eGovWGA effect on Efficiency and Effectiveness

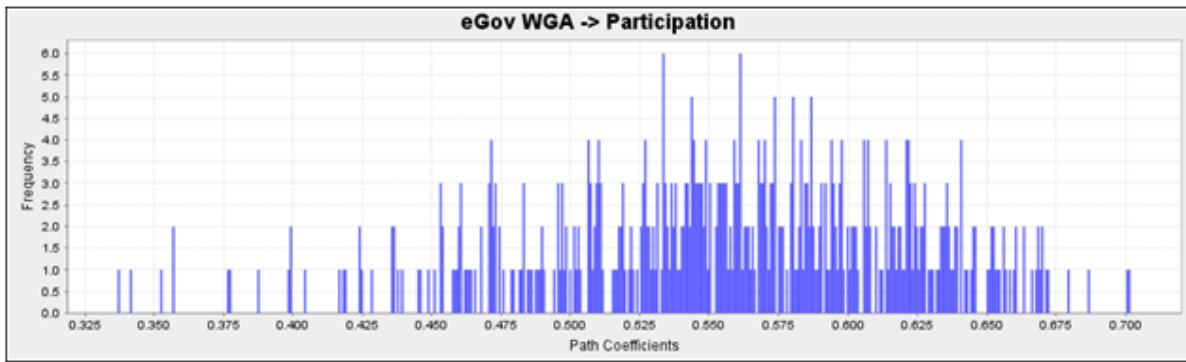


Figure 4.49: eGovWGA effect on Participation

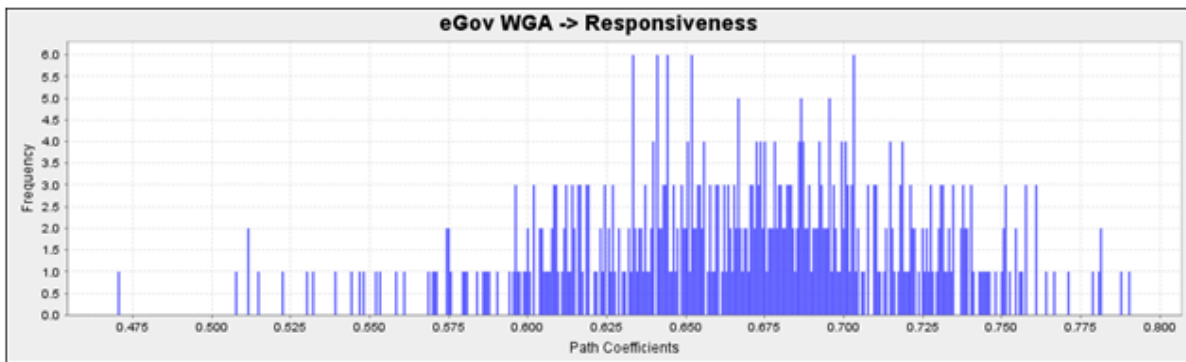


Figure 4.50: eGovWGA effect on Responsiveness

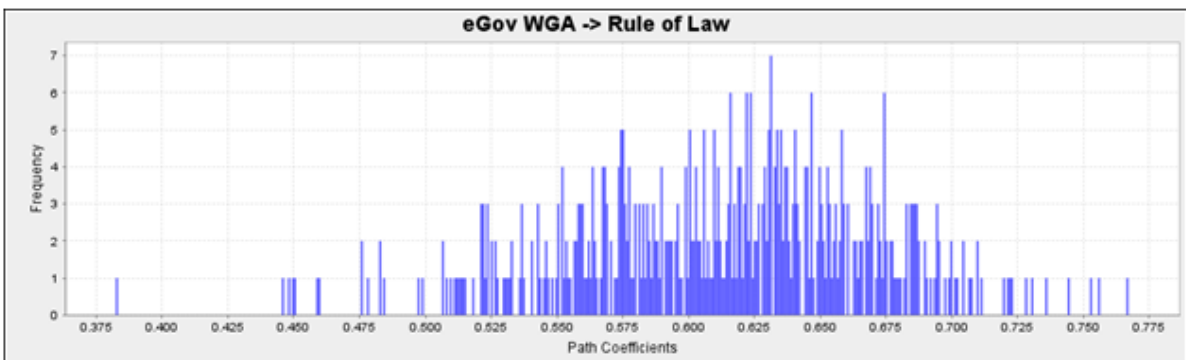


Figure 4.51: eGovWGA effect on Rule of Law

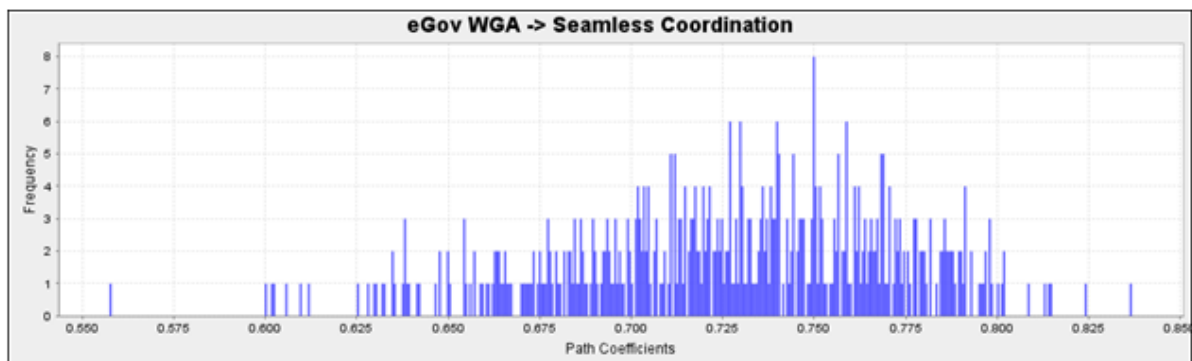


Figure 4.52: eGovWGA effect on Seamless Coordination

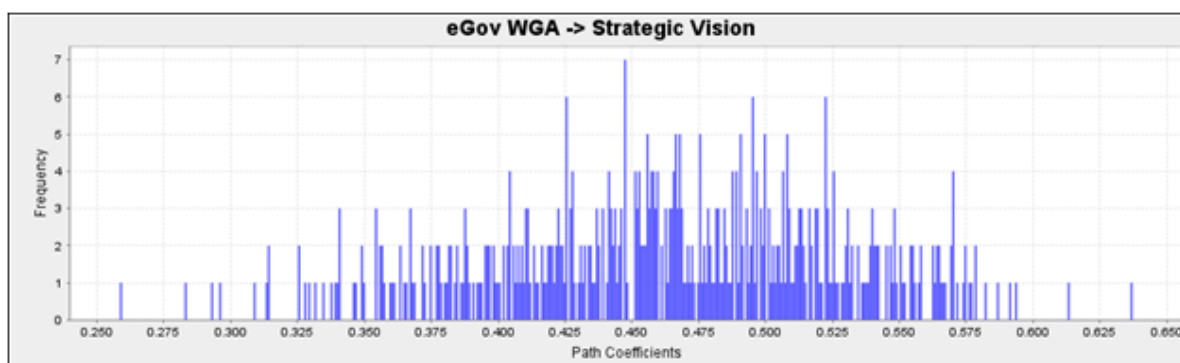


Figure 4.53: eGovWGA effect on Strategic Vision

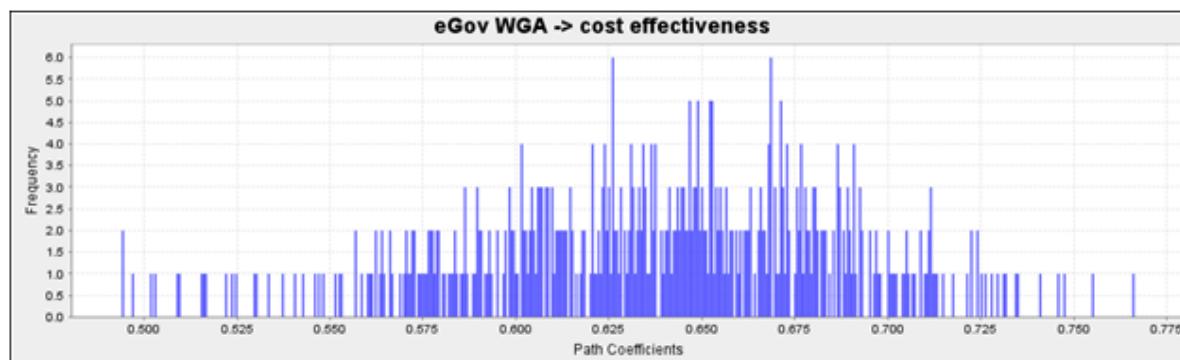


Figure 4.54: eGovWGA effect on Cost Effectiveness

### 4.5.2 Coefficients of Determination ( $r^2$ )

$R^2$  on PLS-SEM calculates the proportion of variation in endogenous variables which can be explained by one or more exogenous variables on a model. In other words, PLS-SEM has the power to calculate how exogenous variables predict and explain their endogenous variables through the different values of  $r^2$  of endogenous variables. According to Hair et al.

(2017),  $r^2$  values above 0.75 are considered substantial, where values between 0.50 and 0.75 are medium values. However, scores below the value of 0.25 are considered as weak values, accordingly.

**Table 4.17: Endogenous latent variables  $r^2$**

Endogenous Constructs	$r^2$	Result
Accountability	0.58	medium
Administrative Simplification	0.72	medium
Cost effectiveness	0.67	medium
Data and information Security	0.68	medium
Decentralization	0.56	medium
Efficiency and effectiveness	0.67	medium
Participation	0.69	medium
Responsiveness	0.74	medium
Rule of law	0.66	medium
Seamless Coordination	0.7	medium
Strategic Vision	0.52	medium
Transparency	0.61	medium
Good Governance	0.59	medium

In this regard, the endogenous latent variable *Good Governance* is explained by 59% of variance by the second order variable *eGov Whole-of-Government Approach* alone or with first order variables *eIntegration* and *eInteroperability* together as indicated by both models together in figures 4.55 and 4.56, respectively. Hence, 0.60 is a medium explanation, according to the rule of thumb, put by Hair et al. (2017).

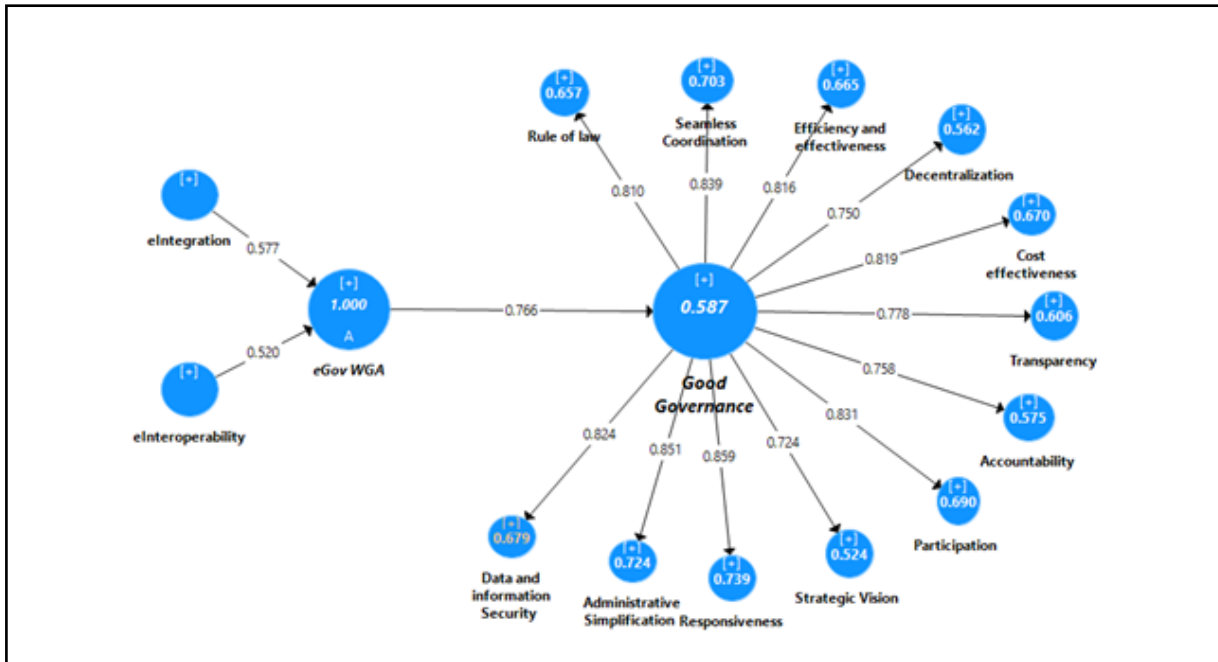


Figure 4.55:  $r^2$  on the structural model (second order effect)

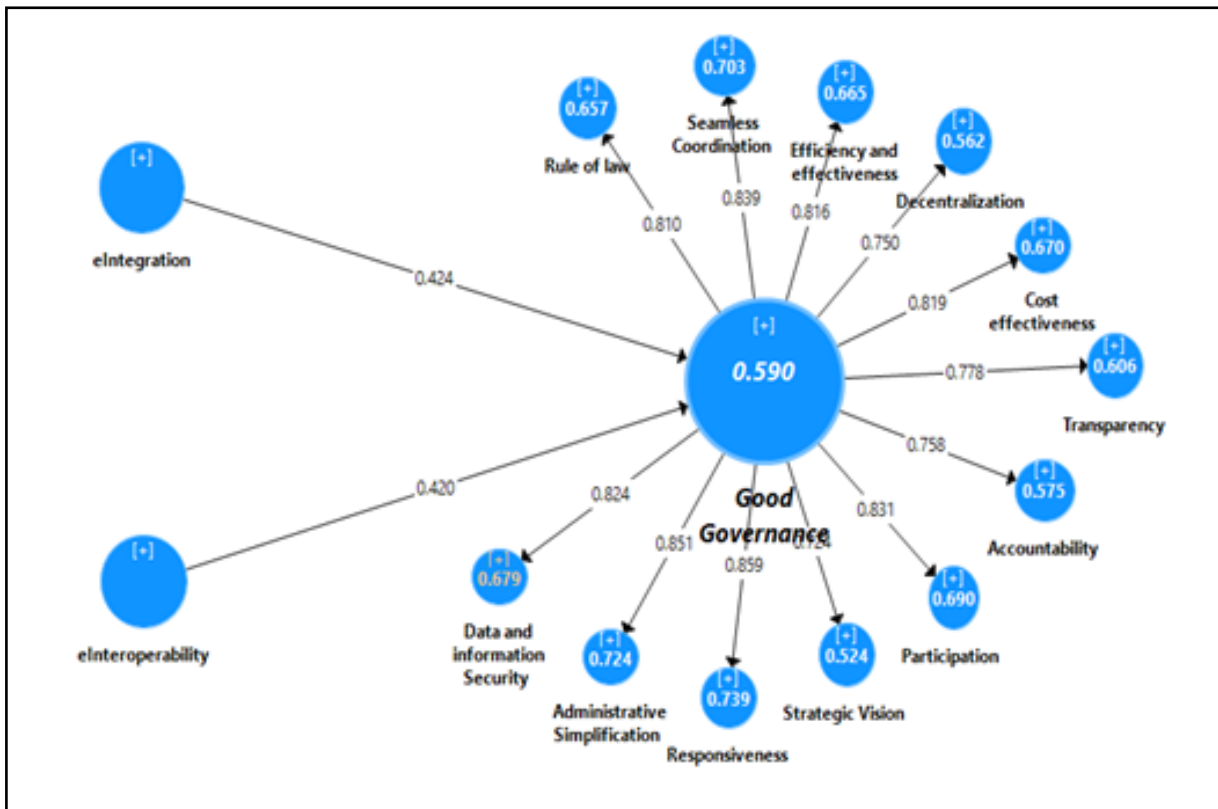


Figure 4.56:  $r^2$  on the structural model (first order effect)

### 4.5.3 Effect Size ( $f^2$ )

For demonstrative purposes, PLS-SEM does not predict effect only, but also the effect size ( $f^2$ ) of exogenous variables on their endogenous variables, as drawn on the model. The arrows coming from exogenous to endogenous variables are paths. According to Hair et al., (2017),  $f^2$  with values higher than 0.35 indicate that there is a large effect size of exogenous constructs over their endogenous. However, values between 0.15 and 0.35 indicate a medium effect; where values between 0.02 and 0.15 indicate a small effect.

Table 4.18: Effect size of exogenous over endogenous constructs

Endogenous Variables	Good Governance	Effect
eIntegration	0.25	Medium
eInteroperability	0.25	Medium
eGov WGA	1.42	High

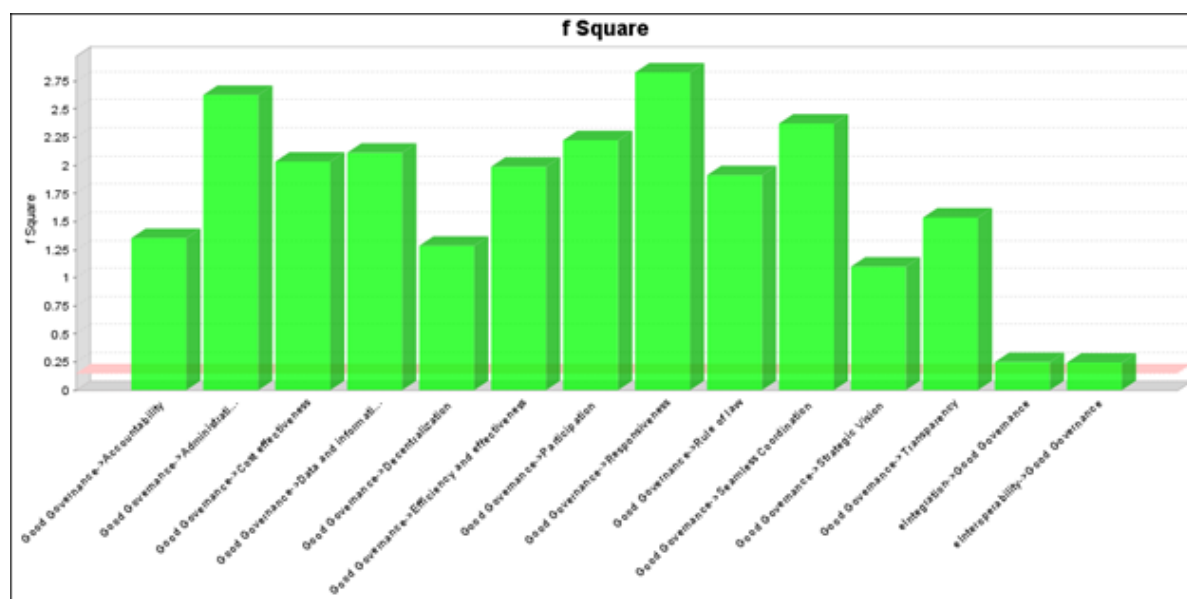


Figure 4.57: Effect size  $f^2$  of exogenous over endogenous constructs

According to the path models shown in figures 4.55 and 4.56,  $r^2$  yields a medium value of 0.59, registered on *Good Governance* drawing a path effect directly from the first-order constructs *eIntegration* and *eInteroperability* or with using second-order construct *eGovWGA* (umbrella factor) . This value is compatible with the measured effect size values of the exogenous constructs *eIntegration* and *eInteroperability*, which scores with  $f^2 = 0.25$

for each, which is a medium effect size too. However, the  $f^2$  measurement of the second order ( eGovWGA ) alone on Good Governance is considered large ( $f^2 = 1.24$ ), according to Hair et al. (2017).

#### 4.5.4 Predictive Relevance ( $Q^2$ )

Predictive Relevance is a complex test, which  $PLS^3$  can run easily, using blindfolding<sup>16</sup>, when the endogenous variables are reflectively constructed on the model.  $PLS^3$  systematically runs the data for prediction purposes using what Hair et al. (2017) calls the *Omission Distance (D)*<sup>17</sup>, in order to compare the original values with the predicted values each time data is removed from the model input.

Table 4.19: Construct cross-validated redundancy

Endogenous variables	SSO	SSE	$Q^2 (=1-SSE/SSO)$
Accountability	1012	663.06	0.34
Administrative Simplification	1012	528.45	0.48
Cost effectiveness	1012	606.87	0.4
Data and information Security	1012	572.63	0.43
Decentralization	1012	680.99	0.33
Efficiency and effectiveness	1012	623.27	0.38
Good Governance	12144	9379.7	0.23
Participation	1012	576.39	0.43
Responsiveness	1012	559.26	0.45
Rule of law	1012	600.84	0.41
Seamless Coordination	1012	541.26	0.47
Strategic Vision	1012	656.3	0.35
Transparency	1012	701.22	0.31

Hair et al. (2017) explains that  $q^2 > 0$  is significant, indicating the model predictive relevance; whereas, lack of predictive relevance is indicated by  $q^2 < 0$ . Hence, the rule of thumb supports this study's model predictive relevance or ability to predict, as all the  $q^2$  are being marked  $> 0$ , as table 4.19 indicates, accordingly.

<sup>16</sup>Blindfolding is a model re-use technique for Stone-Geisser's  $Q^2$  values calculation. It a precise test for the evaluation of cross-validated predictive relevance of the PLS path model (Hair et al., 2017).

<sup>17</sup>Blindfolding deletes data points and provides a prognosis of their original values. In this way, the technique requires an omission distance D between 5 and 12, according to the rule of thumb put by Hair et al., (2017).

## 4.6 Structural Model (Good Governance Variables)

Literature review, document analysis and focus groups reveal that Good Governance is a package of variables, in which each variable affects the other directly or indirectly; nevertheless the researcher aims to test quantitatively the explored direct effects between these variables. In this respect, the Correlation matrix 4.14 indicates that there are significant and positive correlations between Good Governance variables, but correlation does not mean causality. Correlation indicates only association between x and y, where causality is validated by regression tests. Correlation is just a positive hint for association between Good Governance variables, but PLS-SEM is able to measure effect relationships and effect sizes between all the hypothesized effects at once.

In the following study, the researcher aims to investigate the effects existing between the ethics of Good Governance, when they function under the eGovernment WGA, as being discovered in literature review and focus group discussions. Yes, the qualitative phase unveiled that there is a causal relationship between the following ethics (variables)<sup>18</sup>, when eGovernment technologies orchestrate workflows between offices:

Effect Relationship
1. Decentralization → Responsiveness and Efficiency & Effectiveness
2. Efficiency and effectiveness → Cost Effectiveness
3. Transparency → Accountability and Strategic Vision and Participation
4. Participation → Accountability
5. Administrative simplification → Seamless Coordination
6. Rule of Law → Accountability and Data & Information Security.

### 4.6.1 Path Coefficient of the Research Hypotheses

<sup>18</sup>Refer to Figure 4.6 in Chapter 4

Table 4.20: Good Governance path coefficients

Relationship	St.Beta ( $\beta$ )	Std. Deviation	t-value	p-value	Decision
Accountability → Responsiveness	<b>0.27</b>	0.07	3.94	<b>0.00</b>	Supported**
Administrative Simplification → Responsiveness	<b>0.44</b>	0.07	6.39	<b>0.00</b>	Supported**
Administrative Simplification → Seamless Coordination	<b>0.76</b>	0.05	15.46	<b>0.00</b>	Supported**
Decentralization → Cost effectiveness	<b>0.23</b>	0.08	3.01	<b>0.00</b>	Supported**
Decentralization → Efficiency and effectiveness	<b>0.65</b>	0.07	10.06	<b>0.00</b>	Supported**
Decentralization → Responsiveness	<b>0.23</b>	0.06	3.86	<b>0.00</b>	Supported**
Efficiency and effectiveness → Cost effectiveness	<b>0.46</b>	0.08	5.45	<b>0.00</b>	Supported**
Participation → Accountability	<b>0.25</b>	0.07	3.59	<b>0.00</b>	Supported**
Participation → Strategic Vision	<b>0.44</b>	0.08	5.66	<b>0.00</b>	Supported**
Rule of law → Accountability	<b>0.15</b>	0.07	2.06	<b>0.04</b>	Supported*
Rule of law → Data and Information Security	<b>0.69</b>	0.05	13.69	<b>0.00</b>	Supported**
Seamless Coordination → Cost effectiveness	<b>0.22</b>	0.07	3.25	<b>0.00</b>	Supported**
Transparency → Accountability	<b>0.44</b>	0.08	5.31	<b>0.00</b>	Supported**
Transparency → Participation	<b>0.62</b>	0.05	12.23	<b>0.00</b>	Supported**
Transparency → Strategic Vision	<b>0.26</b>	0.07	3.72	<b>0.00</b>	Supported**

Significant at  $p^{**} < 0.01, p^* < 0.05$

#### 4.6.2 Path Coefficient-Hypothesis Test

The Path Coefficient table of the hypothesized effect relationships between Good Governance constructs are all significant, in general. According to the rule of thumb, all the standard betas are recorded approximately higher than 0.15 and  $p$ -values significant at  $p^* < 0.05$ , Therefore, **H<sub>2</sub> is accepted**.

#### 4.6.3 Coefficients of Determination ( $r^2$ )

Table 4.21:  $r^2$  of the endogenous latent variables

Constructs	$r^2$	Result
Accountability	0.55	medium
Cost effectiveness	0.61	medium
Data and information Security	0.48	medium
Efficiency and effectiveness	0.43	medium
Participation	0.38	medium
Responsiveness	0.64	medium
Seamless Coordination	0.58	medium
Strategic Vision	0.40	medium

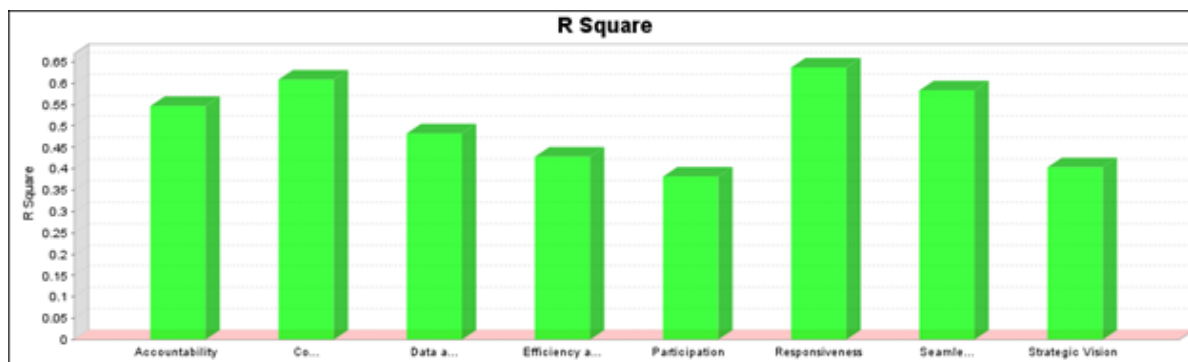


Figure 4.58: Effect size  $r^2$  of exogenous over endogenous constructs

The recorded  $r^2$  of the endogenous variables in table 4.21 and figure 4.58 register a medium proportion of variances in endogenous variables, exercised by the effect of exogenous variables. High  $r^2$  always indicate that endogenous are well explained by their exogenous variables. Furthermore, good  $r^2$  values help PLS for the good prediction of the path models as well. However, results of  $r^2$  are differently explained between experts. For example, Falk and Miller (1992), suggest that  $r^2$  values of 0.10 are acceptable; however, Chin (1998) considers  $r^2$  above 0.67 as high values, where they are medium values for Hair et al. (2017). Therefore, we can say that all the endogenous variables (receiving effect) in the following path are moderately explained by their exogenous variables (exercising effect), as they do not exceed 0.75, according to Hair et al. (2017).

#### 4.6.4 Effect Size ( $f^2$ )

Table 4.22: Effect size of exogenous over endogenous constructs

Path model	$f^2$	Decision
Accountability → Responsiveness	0	Small
Administrative Simplification → Responsiveness	0	Small
Administrative Simplification → Seamless Coordination	1.4	High
Decentralization → Cost effectiveness	0.07	Small
Decentralization → Efficiency and effectiveness	0.75	High
Decentralization → Responsiveness	0	small
Efficiency and effectiveness → Cost effectiveness	0.27	Medium
Participation → Accountability	0.08	Small
Participation → Strategic Vision	0.02	Small
Rule of law → Accountability	0.03	Small
Rule of law → Data and Information Security	0.09	Small
Seamless Coordination → Cost effectiveness	0.07	Small
Transparency → Accountability	0.23	Medium
Transparency → Participation	0.62	High
Transparency → Strategic Vision	0.07	Small

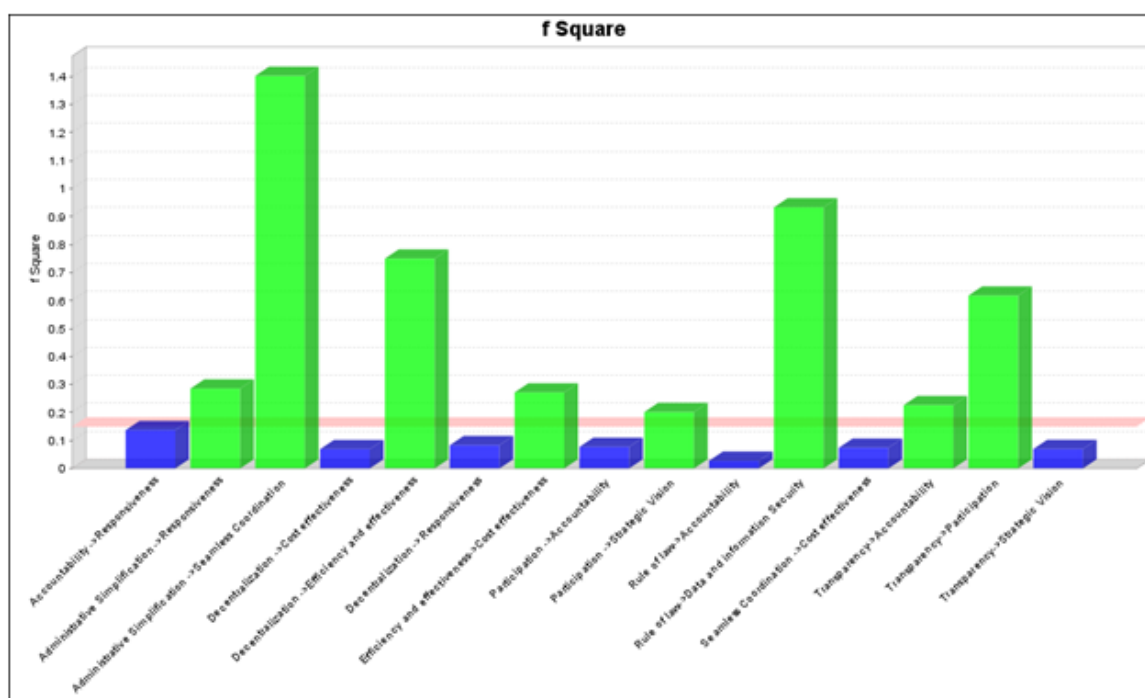
Figure 4.59: Effect size  $f^2$  of exogenous over endogenous constructs

Table 4.22 and figure 4.59, register all the effect sizes of the exogenous variables on their endogenous variables, as indicated by the arrows in table 4.22. The decision tab, on the same table, adds the type of effect. Hence, PLS-SEM does not only prove effect, but adds further information about the size of this effect, exogenous variables can exercise on their

endogenous variables. Accordingly, the highest effect is marked by the Administrative simplification on Seamless Coordination with an  $f^2 = 1.4$ , as indicated in table 4.22.

#### 4.6.5 Predictive Relevance ( $Q^2$ )

Table 4.23: Construct cross-validated redundancy

Constructs	SSO	SSE	$Q^2$ (=1-SSE/SSO)
Accountability	1012	683.96	0.32
Cost effectiveness	1012	652.09	0.36
Data and information Security	1012	699.38	0.31
Efficiency and effectiveness	1012	763.26	0.25
Participation	1012	774.23	0.23
Responsiveness	1012	625.37	0.38
Seamless Coordination	1012	623.09	0.38
Strategic Vision	1012	740.34	0.27

Q-square values above zero indicate that the questionnaire values are well reconstructed and that the model has a good predictive relevance.  $q^2 > 0$  indicates that the model is of predictive relevance; whereas, lack of predictive relevance is indicated by  $q^2$  under zero ( $< 0$ ), according to Hair et al. (2017). Table 4.23<sup>19</sup> exhibits  $q^2$  scores for each endogenous construct  $> 0$ , indicating that this study model has a high out-of-sample predictive ability (predictive relevance), when points from data are taken out and predicted many times, using the blindfolding technique.

<sup>19</sup>SSE is the sum of squares of prediction errors, and SSO is sum of squares of observations on reflective endogenous latent variables (Hair et al., 2017)

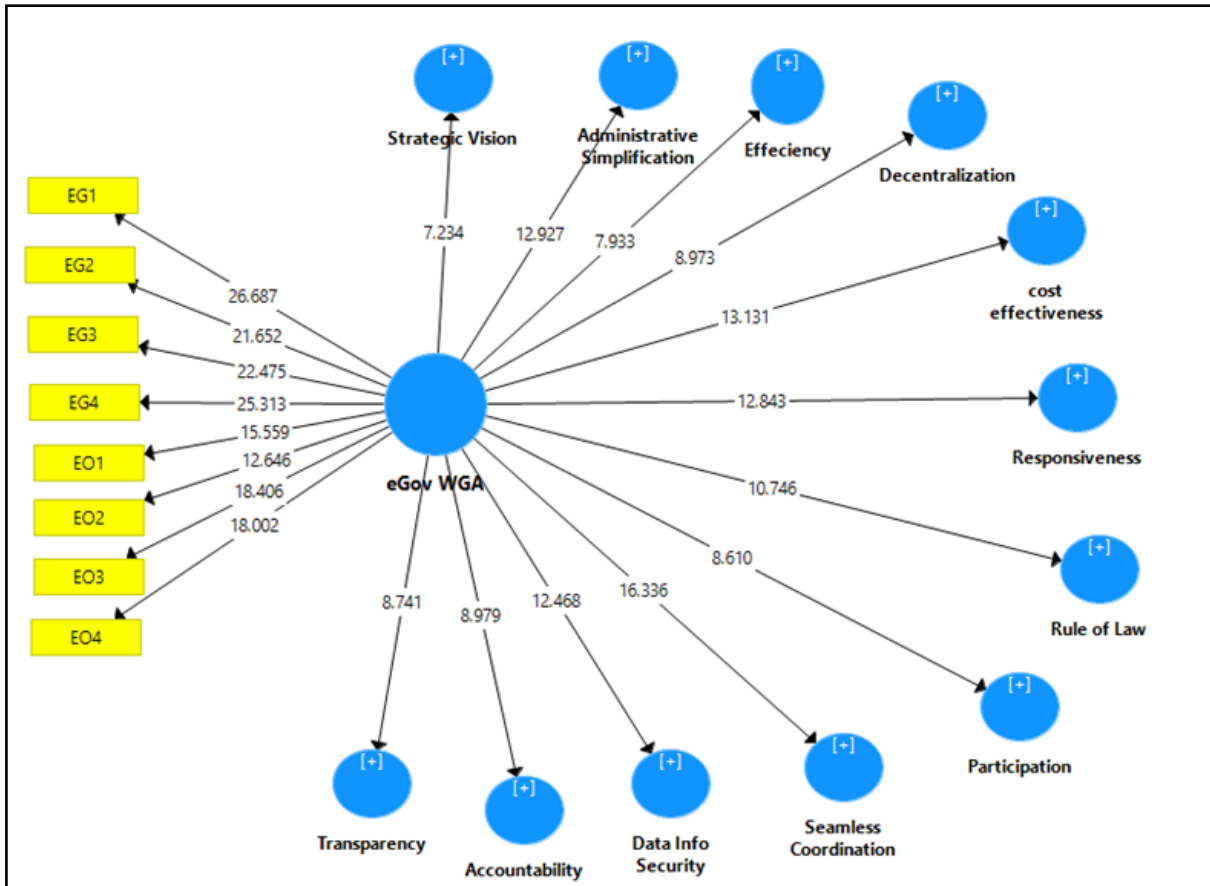


Figure 4.60: Path model: effect path of eGovWGA over Good Governance variables

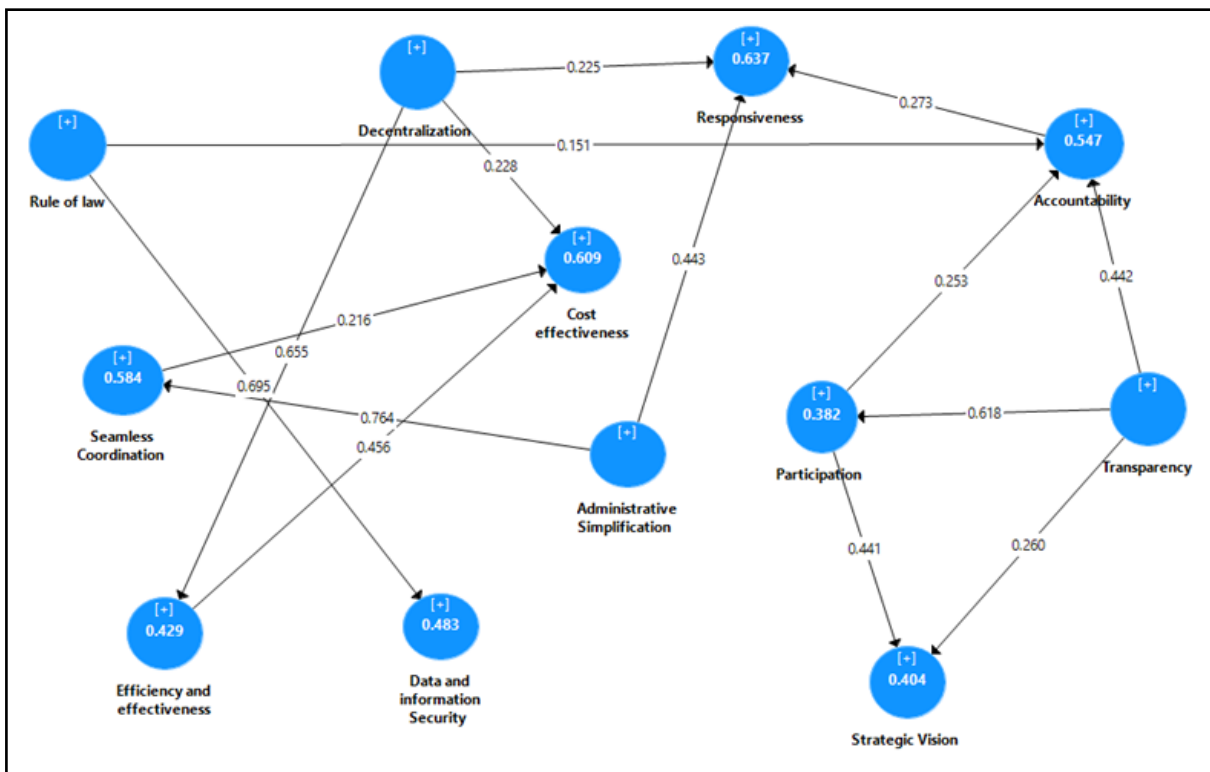


Figure 4.61: Path model: effect paths between Good Governance variables

## 4.7 Importance-Performance Map Analysis

The Important-Performance Map Analysis (IPMA) is a widely used technique in different disciplines, especially in Marketing (Seng Wong, Hideki, & George, 2011), that prescribes customer satisfaction on certain products or services. IMPA has different names, according to the PLS-SEM language. It is the Importance-Performance matrix, impact performance map or priority map analysis. The following names suggest that the map is two-dimensional, based on two different scores: importance<sup>20</sup> and performance<sup>21</sup> of customer satisfaction in a simple and understandable grid for interpretation. IPMA is an extension to standard PLS-SEM results, reporting of path coefficient estimates by the calculation of the average (mean or median) values of the latent variable scores. In this way, IPMA contrasts the structural model total effects on a specific target construct with the average latent variable scores of this constructs to spot predecessors with high importance and relatively with low performance as potential areas of improvement by managerial activities.

IPMA is a reachable statistical test on different softwares, including SPSS and PLS. On SPSS, researchers can flower the contrasts of target constructs and their *Importance-Performance* scores on the map, based on available scores. However, PLS automatically rescales the average intervals of the unstandardized total effects (importance) with the average scores (performance) of the endogenous variables, based on 1-5 or 1-7 Likert scale values. The median<sup>22</sup> values of the scores are distributed on the grid, indicating the lowest performance with 0 ending in 100 as the highest score of performance. According to Hair et al. (2017), positive outer weights on the scale, constructed formatively or reflectively should indicate a high performance of predecessors up to 0.95 on the grid, which is divided by the importance vertical axis at the point of 0.30 and a performance horizontal axis at the point of 0.30 when the scale is constructed in a 5-Likert scale<sup>23</sup>.

<sup>20</sup>Total effects.

<sup>21</sup>The average values of the latent variable scores.

<sup>22</sup>For ordinal scores.

<sup>23</sup>When a 5-point scale is used in the study, the average (mean or median) between 1 and 5 is 3 (0.3), measuring the gaps between Performance and Importance of the attributes measured in the scale.

The researcher runs IPMA, exploring *attributes*<sup>24</sup> with a high importance but relatively with low performance, as priorities to be improved by management activities of decision-makers in the future (Hair et al., 2017). In other words, Importance-Performance Matrix Analysis (IPMA) allows experts and researchers in different disciplines for tool evaluation, since it can put the finger on areas of development and improvement, providing clear maps for strategic development. According to Seng Wong et al. (2011), Importance-Performance Matrix is divided into four quadrants as demonstrated in figure 4.62.

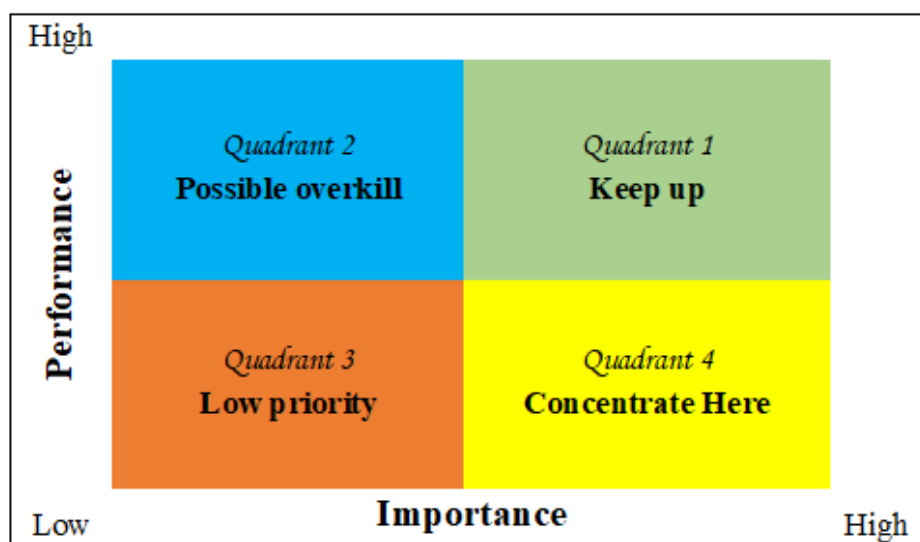


Figure 4.62: Importance-Performance matrix quadrants

Source: adapted from Martilla & James (1977).

**Quadrant 1** is normally the ideal area in which contributor constructs do highly perform with high importance. The High Importance/High Performance Quadrant is labelled as *Keep up* the good work. All attributes that fall into this rectangular form a strength to their target construct; therefore, a gain to the stakeholders.

**Quadrant 2** with Low Importance/High Performance attribute is categorized as *Possible Overkill* rectangular. The attributes that fall into this rectangular are interpreted by theorists as being highly emphasized by decision makers; consequently, stakeholders should reconsider them and more focus should be given to the attributes falling into

<sup>24</sup>Determinants or Constructs according to the language of PLS.

quadrant 4, instead.

**Quadrant 3** contains Low Importance/Low Performance attributes, which do not pose any threat to the target constructs. Managers consider them with low priority, accordingly.

**Quadrant 4** is a High Importance/Low Performance rectangular that is a *Concentrate Here* quadrant. Therefore, its attributes are key contributors that need further improvement and focus, by policy makers and managers, since they are considered by customers as being highly important, but poorly performing (Chung & Yun, 2014; Hair et al., 2013, 2016; Martilla & James, 1977; Seng Wong et al., 2011).

In the following study, the researcher uses IPMA to incorporate the voice of the GID users into Importance-Performance Analysis to assess performance/importance of the target constructs in Good Governance, under effect of their exogenous constructs. The researcher aims to discover constructs performing under  $<0.30$ , but with high importance  $>0.30$ , to their target constructs, as sources of problems. More precisely, the researcher aims to discover constructs, falling into the yellow quadrant (if there are any), since there is a chance to improve their performance. For Hair et al. (2013), the improvement of low performing constructs seldom need few resources and logistics for a better performance, in the future.

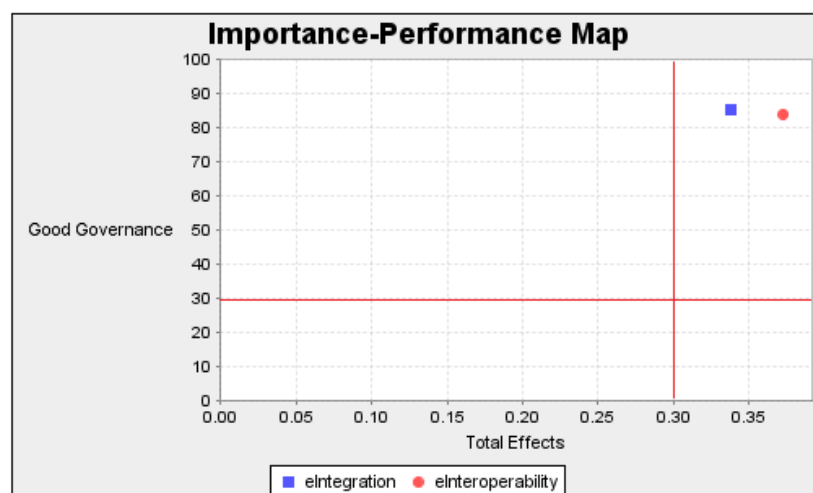


Figure 4.63: eIntegration and Interoperability in construction of Good Governance

Figure 4.63 in relation to figure 4.62 indicates that eIntegration and eInteroperability are highly important and performant in the construction of *Good Governance*. The matrix

shows that both predecessors fall into the green quadrant of *keep up the good work*. In this way, we can say that a one-unit increase in *eIntegration* and *eInteroperability* performances will increase the performance of *Good Governance* by the size of Integration and Interoperability's unstandardized total effects, if everything else remains equal (*ceteris paribus*)<sup>25</sup>.

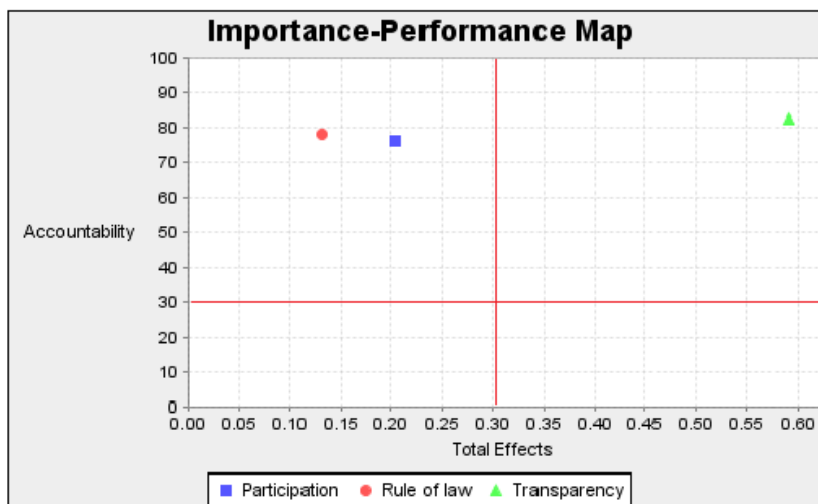


Figure 4.64: Participation, Rule of Law and Transparency in the construction of Accountability

Based on the responses of the participants, IPMA figures out that Transparency is more important for the construction of Accountability approaching to 0.60, which is a high score accordingly. Rule of law and Participation are also performing well, like Transparency, but they are considered not important (< 0.30) for the making of Accountability, as indicated in matrix 4.64 (Hair et al., 2013).

<sup>25</sup>It is a Latin word which means all other "things being equal", being a causal, empirical or logical relation between two variables or equations, if no external factors intervened in the relation, like higher oil prices should lead to less demand for oil *ceteris paribus* (Hair et al., 2013).

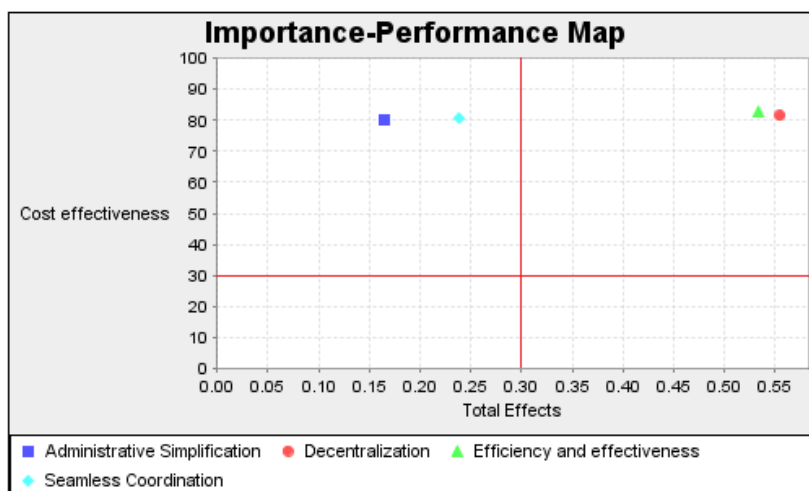


Figure 4.65: Administrative Simplification, Decentralization, Efficiency & Effectiveness and Seamless Coordination in the construction of Cost effectiveness

Figure 4.65 indicates that Decentralization and Efficiency & Effectiveness are figuring in the green quadrant (*keep up*), performing well. These two constructs are considered also more important for the reduction of costs (Cost effectiveness) than Administrative Simplification and Seamless Coordination.

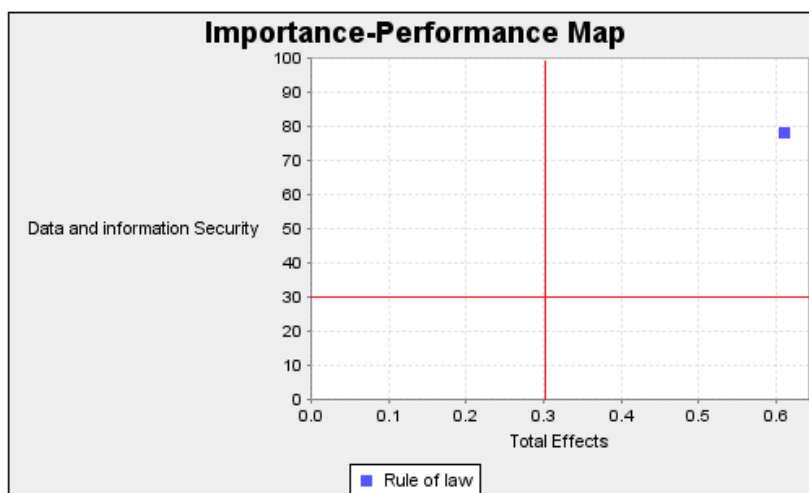


Figure 4.66: Rule of Law in the construction of Data and Info Security

According to figure 4.66, Rule of Law is highly important above >0.30 and performant >0.30 in the construction of Data and information Security.

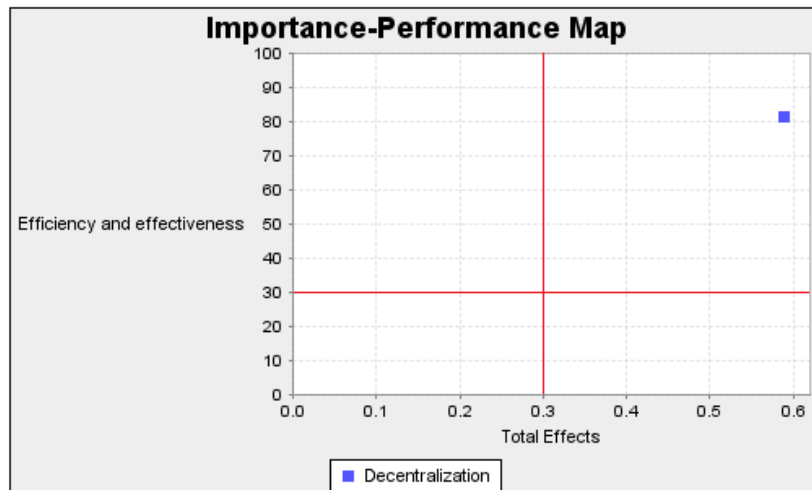


Figure 4.67: Decentralization in the construction of Efficiency & Effectiveness

IPMA analysis in map 4.67 shows that Decentralization is also performing in the green quadrant (*keep up*), being highly important above  $>0.30$  and performant  $>0.30$  in the construction of Efficiency and effectiveness of the GID system.

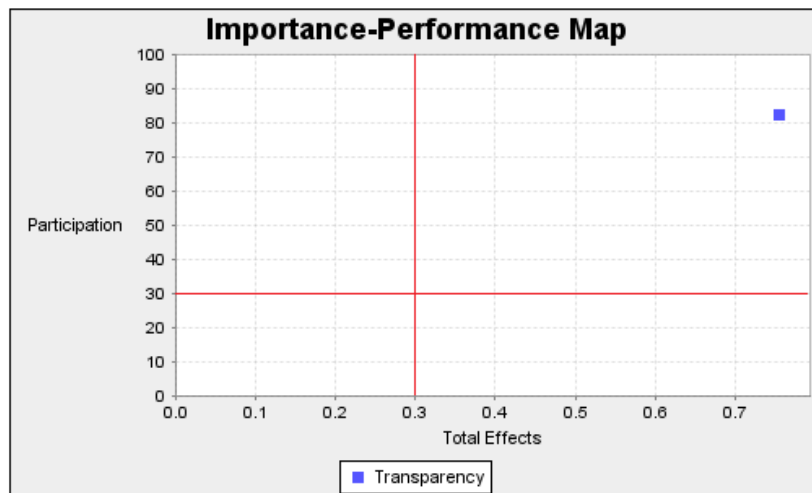
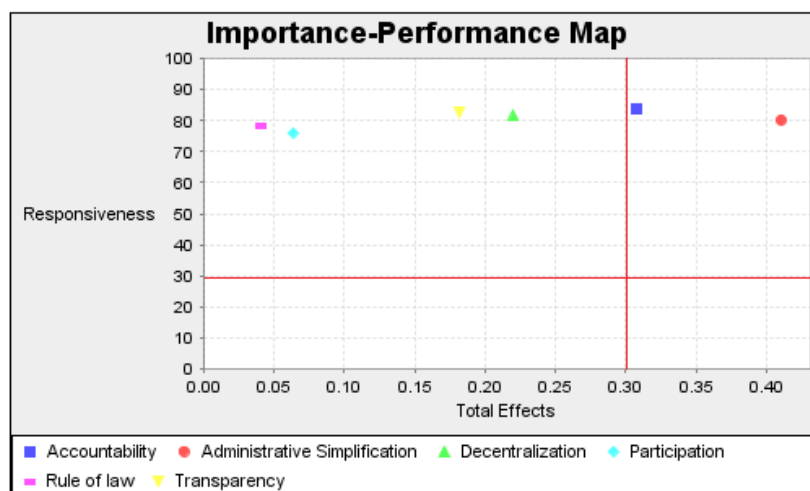


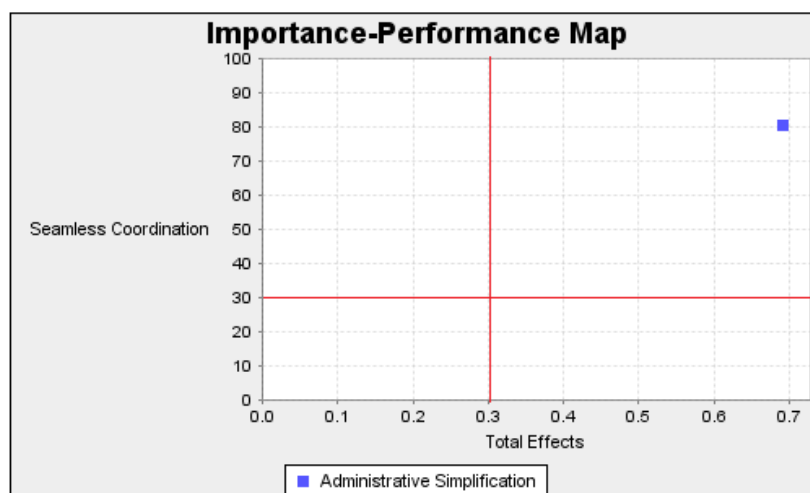
Figure 4.68: Transparency in the construction of Participation

According to the map in figure 4.68, Transparency is an important and performant condition for the making of Participation among the users of the system GID in particular and the eGovWGA, in general. In a *ceteris paribus* manner, a one-unit increase in the performance of of Transparency would increase the Participation of the integrated stakeholders in the making of decision-making and strategic visions.



**Figure 4.69: Accountability, Administrative Simplification, Decentralization, Participation, Rule of Law and Transparency in the construction of Responsiveness**

According to matrix 4.69, Accountability and Administrative Simplification are high performant ( $> 0.80$ ) and high important ( $> 0.30$ ) in the making of Responsiveness. However, Decentralization, Participation, Rule of Law and Transparency are less important in its construction ( $< 0.30$ ).



**Figure 4.70: Administrative Simplification in the construction of Seamless Coordination**

In a ceteris paribus situation, the matrix 4.70 indicates that Administrative Simplification is very important (0.70) and performant (0.80) for a Seamless Coordination in public administration, which means that the more we simplify procedures and cut red tape the more we streamline coordination, workflow and management between the integrated offices.

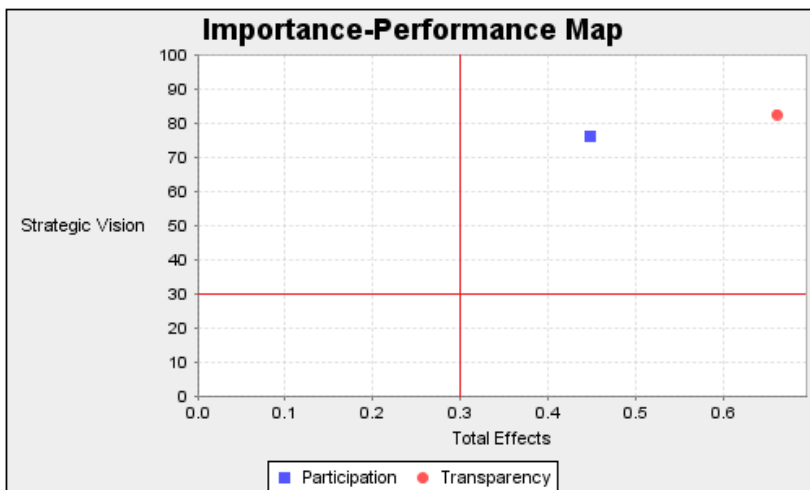


Figure 4.71: Participation and Transparency in the construction of Strategic Vision

Based on the satisfaction of the participants, PLS-IPMA calculates that Transparency as highly important (0.77) and performant (0.82) than Participation (Importance= 0.45; Performance = 0.76), in the making of Strategic Vision, which looks logic and reasonable as well. Therefore, the more workflows are transparent on systems, the more stakeholders are encouraged to take part, based on correct information.

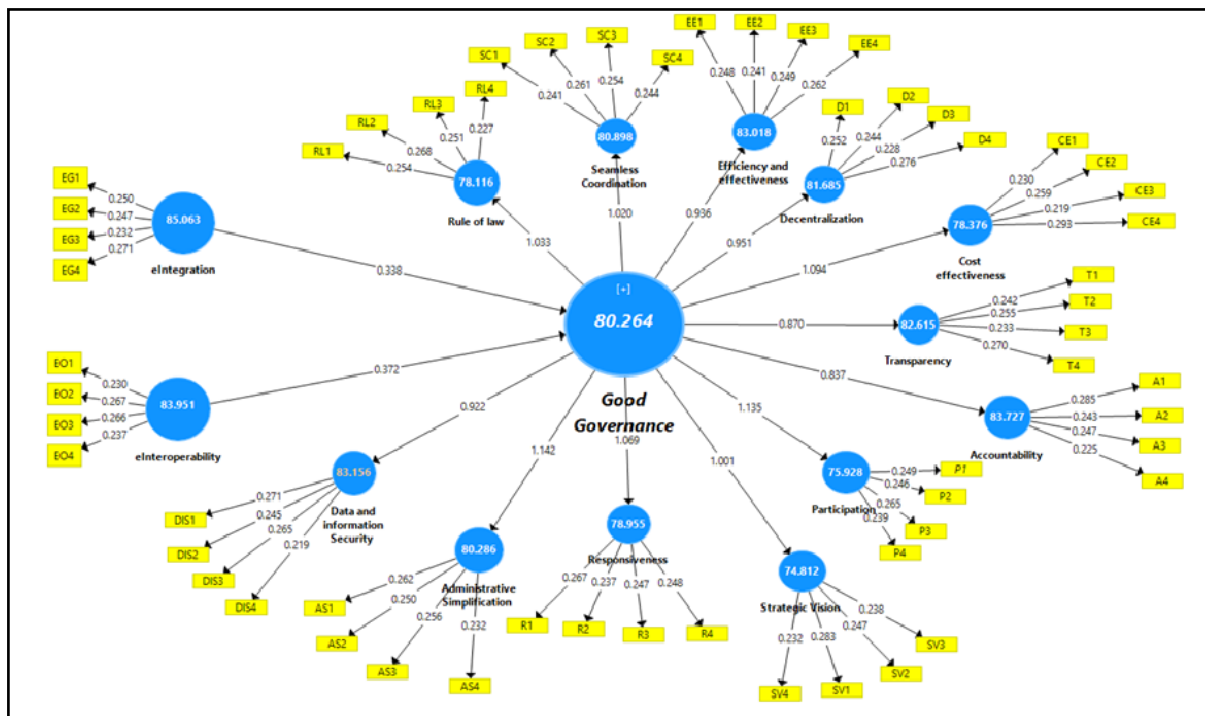


Figure 4.72: Structural Model: eIntegration and Interoperability in construction of Good Governance

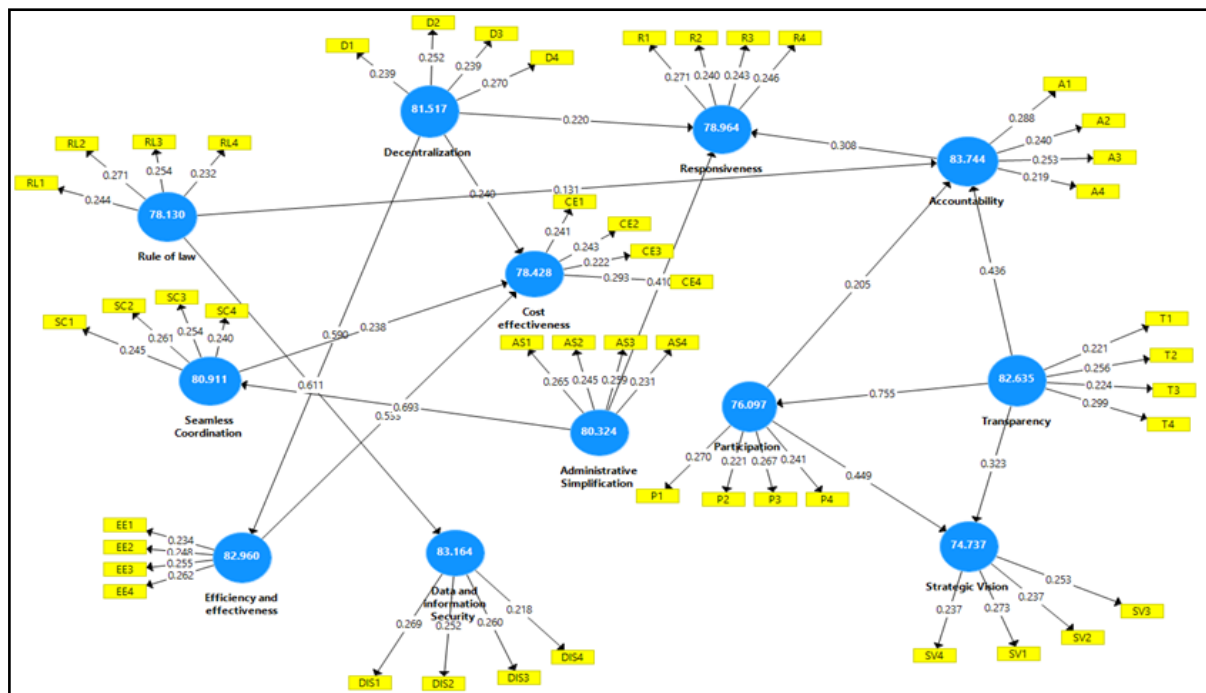


Figure 4.73: Structural Model: Good Governance variables in construction of each other

## 4.8 Summary

The synthesis of document analysis and focus groups reveal together that the GID system is a successful eGovernment initiative in Morocco. The system manages to federate back offices working on expenditure management, increasing Good Governance between them. The researcher collected relevant thematic codes in the studied documentation for focus group discussions, after being organized into independent or dependent variables (instrumentation). The researcher finishes this section, inter-relating the studied themes with their relevant references to explore their relationships. The focus group discussions have given an in-depth exploration and corroboration to the developed themes, formed into questions that stimulated productive discussions about the system GID and its roles in promoting Good Governance in the Moroccan public sector. Furthermore, the qualitative part answers the qualitative questions presented in the focus group transcript and methodology. The participants' stronger arguments and response items helped a lot in construction of instrumentation (questionnaire), used to measure the effect of eGovernment Whole-of-Government Approach on Good Governance in Morocco, taking the GID as a case of study. The quantitative phase yields important findings to answer the



quantitative questions and hypotheses, developed in Methodology. Both qualitative and quantitative findings are merged up together to answer the mixed method question at the end. In conclusion, the *quali-quantitative* findings will be discussed in chapter 5, concluding with the necessary implications and recommendations of study relatively.

## Discussion, Implications, Conclusions and Recommendations

### 5.1 Findings Discussion

**T**he following chapter contains the discussion of the findings, implications, conclusions and recommendations of the dissertation. It presents the research dissertation and its outcomes based on the findings of qualitative and quantitative data analysis, as well as the summary of the hypotheses findings. The chapter concludes with proposed frameworks and recommendations for enhancing the eGovernment Whole-of-Government utilities for the promotion of Good Governance between offices.

#### 5.1.1 Summary of the Study

eGovernment technologies have been chosen as a solution for modernization, reform and automation of public administration, enhancing Good Governance in the front office and back office deliveries. In this dissertation, the quali-quantitative findings prove that eGovernment has the power to modernize and reform public institutions and break the siloed traditions, with less paper-based transactions between offices. The findings indicate that eGovernment integrated systems could improve the federation of different institutions to work in harmony, synergy and good governance.

The dissertation focuses its studies to explore and investigate the impact of eGovernment Whole-of-Government endeavours to improve the governance mechanisms between

public organizations. The researcher has chosen for a sequential exploratory design to answer the qualitative, quantitative and mixed research questions of the study, as it is dictated by Creswell (2014). Certainly, the seven questions developed by the research project are vibrant borders that guided the quali-quantitative findings:

#### Research Questions

- **Qualitative Research Questions:**

1. How can the eGovernment Whole-of-Government Approach (eGovWGA) reform governance in the Moroccan Public Sector?
2. To what extent can the silo-based approach hinder Good Governance in the Moroccan public sector?

- **Quantitative Research Questions:**

3. Is there any effect of eGovernment Whole-of-Government Approach (eGovWGA) on Good Governance in the Moroccan Public Sector?
4. Is there any influence between the values of Good Governance under the effect of eGovernment Whole-of-Government Approach (eGovWGA) in the Moroccan Public Sector?
5. What variables exhibit high importance and low performance in the construction of Good Governance, worth to be improved by managers?

- **Mixed Methods Question:**

3. Is there any relationship between the de jure documentation and de facto outcomes of eGovernment Whole-of-Government Approach on Good Governance in Morocco?

The reviewed literature in chapter 2 indicates that eGovernment Whole-of-Government Approach (eGovWGA) enhances Good Governance ethics between public administrations (Gottschalk & Solli-Saether, 2009; Haque & Pathrannarakul, 2013; Kettani et al., 2008; Pardo et al., 2012; United Nations, 2012, 2014; Westholm, 2005). The use of ICTs between offices can federate workflows, reform governance and cut siloed cultures, which are the source of bad governance in public administration (United Nations, 2008b, 2014). The researcher

opted for the Integrated System of Expenditure Management in Morocco, as a case for study to explore and investigate the reviewed theory.

The sequential exploratory design of the study has divided chapter 4 into qualitative and quantitative data mining (Creswell, 2014). Hence, the researcher analyzed most of the existing documentation, produced about the system GID, as a new mechanism to reform administration, promote Good Governance and cut the siloed management between the different offices and organizations managing public expenditure in Morocco.

During the first section of the qualitative phase, the researcher skimmed over 38 pieces of information, including eGovernment plans, newspapers, manuals, brochures and videos. After analysis, the researcher extracted the following themes:

Extracted Themes		
1. Responsiveness	8. Accountability	16. Participation
2. Interoperability	9. GID	17. Rule of Law
3. Good Governance	10. eGovernment	18. Administrative Reform
4. Transparency	11. Integration	19. Corruption
5. Efficiency/Effectiveness	12. Decentralization	20. WGA
6. Administrative Simplification	13. Data & Info Security	21. Dissatisfaction
7. Cost Reduction	14. Seamless Coordination	22. Bad Governance
	15. Strategic Vision	23. Hierarchy

The mined themes were taken into an in-depth analysis in focus group discussions, in which six public agents animated the discussions, exploring the roles of the GID system and its initiative to promote Good Governance between offices. The yielded themes above guided the discussions with the group, seeking to mitigate the limitations of theory, helping to explore the success or the failure of the GID as an integrated system of public management between different offices in Morocco. The discussions responded to the qualitative questions and yielded important data that helped the researcher in the construction of his survey, as indicated by Creswell (2014).

At the qualitative phase, the survey was distributed and sent to more than 1000 public officers working with the system GID in Morocco. The online survey link is physically delivered at the front offices of different ministries in Morocco, after being validated at the pilot study. The link of the questionnaire is emailed also to all the General Treasurers in Morocco; however, only 198 servants responded to my online questionnaire, where 55 users returned the paper version of the questionnaire.

The questionnaire measures fourteen variables in total: two variables constitute the drivers of eGovernment Whole-of-Government operations in the public sector, deemed to increase Good Governance between offices, which is the sum of twelve ethics according to the literature review and qualitative findings. The first section of the questionnaire is designed to render some background information about the participants: their age, gender, academic level, profession, administration and regions, they belong too, for descriptive statistics. The second section of the questionnaire scales 12 factors of Good Governance, measured by 48 items in total, in which each factor of Good Governance is measured by 4 items. Hence, the totality of the twelve factors scored the dependent variable: Good Governance in this survey.

The third section of the questionnaire measures two principal drivers of the eGovernment Whole-of-Government Approaches: electronic integration and interoperability of the system GID, measured by eight items in total. Both variables score the independent variable: eGovernment WGA in this survey. These questionnaire items are developed in a way to measure the electronic integration and interoperability of the GID system for holistic management of public expenditure in Morocco and its abilities to promote Good Governance values among these integrated offices. The response items are analyzed, using the Statistical Package for Social Sciences (SPSS version 25) and PLS version 3. SPSS is implemented for an Exploratory Factor Analysis (EFA), used to explore the model factors (variables) and provide evidence of construct validity. The test partitions the items and variables variances into major components, according to the factor rotation, for an exploratory discovery of the data; while, Confirmatory Factor Analysis CFA is implemented as a second test to assess the quality of the factor structure looking how the model is

accurate and valid (Harrington, 2008) , using PLS.

Descriptive statistics draw a piece of general background information about the population and its demographic characteristics. Inferential statistics uses SPSS for Exploratory and Confirmatory Factor Analysis and analyzes the factor structure of the developed instrumentation. The questionnaire model underwent a firm evaluation for convergent and discriminant validity, using PLS. Partial Least Squares Structural Equation Modeling (PLS-SEM) is used, at the quantitative phase, to measure the effect between exogenous and endogenous variables in order to answer the quantitative research questions. Importance-Performance Matrix Analysis (PLS-IPMA) is also used to measure the importance and performance of the endogenous constructs, functioning under their exogenous variables in the study. Both qualitative and quantitative phases are merged together to answer the mixed method question at the end.

## 5.2 Qualitative Findings

### 5.2.1 Document Analysis Findings

The qualitative phase comprises two tests namely document analysis and focuses group. Both techniques are deployed together before quantitative analysis to increase trustworthiness in the development of a convergent scale. Indeed, both techniques helped in the exploration of saturated themes and items for the coming section. The reviewed documents on the GID system contain sufficient excerpts, quotations and passages, collected and reported by qualified researchers and experts in the field. A list of reports, newsletters, magazines, videos, leaflets and images in chapter 4 are decoded, using a sophisticated qualitative analysis software: Nvivo version 12.

The thematic analysis of different qualitative data willed up different themes, related to the use of the GID system between the Moroccan public administrations. Nvivo extracted a table of the most decoded themes in French, before their translation into English. The decoded nodes in chart 4.2, chapter 4 have discovered that Administrative Simplification is the highly decoded theme in the documentation (18 items decoded), followed by Cost

Reduction, Responsiveness and Strategic Vision (15 items decoded for each); Efficiency and Rule of Law themes decoded 14 items, accordingly. eGovernment, GID, Good Governance, Interoperability and Transparency have 13 items decoded; Accountability (12 items decoded); Administrative Reform, Integration and Participation (11 items decoded); Whole-of-Government Approaches decoded 10 times, accordingly. Data and Information security (9 items decoded); Corruption, Decentralization and Dissatisfaction (8 items decoded). However, Bad Governance is mentioned only 7 times, Hierarchy 6 times. Seamless Coordination and Dissatisfaction are decoded only 5 times, as well, in document analysis <sup>1</sup>. The following lexical explores the endeavours of the GID system as an eGovernment WGA initiative to promote Good Governance between back offices, working together on public expenditure management in Morocco, which does overlap and corroborate accidentally with the same themes, developed by the United Nations (2014). In this way, the distribution of themes by Nvivo helps the researcher to separate between Independent and Dependent variables, as indicated in chapter 4. Nvivo has extracted also a visible picture, showing the association between the relevant nodes (themes) and their references (documents), as well as the association between the nodes, references and figures (4.4, 4.5, 4.6 ), added to the relationship between emergent themes (variables), as indicated in figures 3.3 and 3.2. The figures extracted from Nvivo presented the relevant themes in the following effect associations :

Effect Relations
<ul style="list-style-type: none"> <li>• Corruption → Bad Governance</li> <li>• GID → Good Governance</li> <li>• eGovWGA → Good Governance</li> <li>• Integration → Good Governance</li> <li>• Interoperability → Good Governance</li> <li>• Decentralization → Responsiveness and Efficiency &amp; Effectiveness</li> </ul>

<sup>1</sup>For transparency of the data and its translation, the following decoded themes are exhibited in French, as being extracted from Nvivo (refer to Word Cloud Query in figure 4.3).

- Efficiency and effectiveness → Cost Effectiveness
- Transparency → Accountability, Strategic Vision and Participation
- Participation → Accountability
- Administrative simplification → Seamless Coordination
- Rule of Law → Accountability and Data & Information Security.

To sum up, document analysis is necessarily contributing to the sequential phase in qualitative analysis. Document analysis helps the researcher to corroborate the Good Governance ethics, enhanced by the system GID between integrated offices. However, it is not sufficient to visualize how the effect between eGovWGA and Good Governance occur. Therefore, the researcher resorted to focus group discussions to explore more in-depth the phenomenon to build solid and valid instrumentation.

### 5.2.2 Focus Group Findings

Focus group discussions with six public agents from different public administrations seek to mitigate the limitations of document analysis, building a reliable quantitative instrument. Furthermore, focus group discussions allow the researcher to respond to qualitative questions. Nvivo has extracted the most relevant items related to the discussed themes with the participants in word trees summarizing the participants' responses, vis-à-vis the discussed themes as they are auto-coded by Nvivo. Most of the statements began with the word **GID** and followed by the values, the system can add to offices according to the participants' statements.

The word tree indicated how the participants are satisfied or dissatisfied about the system GID and its endeavours for Good Governance promotion in back offices.

We hereby summarize all the participants' reactions towards the discussed themes as they are indicated by the word trees, chapter 4:

## Integration

- GID is not fully integrated between the managers of public expenditure.
- Other offices (Police, Banks, Taxes offices) must be integrated into GID.
- It offers a unified integration among offices.
- It offers synergy and coordination between offices.
- The rules of finance are integrated automatically into the system.
- Integration facilitates expenditure management between offices.
- It allows for decentralized management of expenditure.

## Interoperability

- GID is an interoperable platform between offices.
- It unifies workflows interfaces and languages and standardizes data format and protocols.
- It offers a secure electronic interoperability and transaction between the stakeholders to work in a Whole-of-Government Approach, managing public expenditure efficiently in Morocco.
- Interoperability on the platform GID is simple and user-friendly.
- Interoperability and integration enhance Accountability between offices.
- Interoperability unifies forms and workflows between offices.
- It unifies transactions and simplifies the use of forms, procedures and transactions between offices.

## Efficiency &amp; Effectiveness

- GID promotes Efficiency and Effectiveness in the management of public expenditure.
- The System dematerializes and orchestrates public expenditure among different stakeholders.
- It reduces risks in its managements.
- GID promotes productivity and performance and achieves the desired objectives.
- GID removed the chain processing of documents.
- It reduces duplication and work efforts.
- GID promotes effective management between the different accountancies.

- GID is not related to office existence, the staff can process their work from home (working with objectives).

### Cost Reduction

- GID reduces costs and red tape, between offices.
- The paperwork and the postal correspondence witness a clear reduction starting from 2010.
- The system GID reduces the number of the human resources, allocated to the execution of the public expenditure.
- GID accelerated fiscal actions in Morocco.
- Going numerical on the GID means going cleaner and greener.
- It yields important cost savings for the country, in terms of paper, print, fuel, personnel etc.
- It reduces maintenance of the application and renders cost savings and important economies to the local and national offices.

### Transparency

- GID is a transparent system which fosters clear and open management of expenditure between all the integrated offices in Morocco.
- GID identifies accounts and acts, since their creation and provides clear budget transparency between national and local offices.
- Expenditure offices used to work in ambiguity and bad governance, before the coming of the GID.
- Transparency of information on GID makes it easy to spot irresponsibility.
- It enhances accountability between offices as dictated by law 61-99.

### Accountability

- The System GID allows for vertical and horizontal accountability between the authorizing, sub-authorizing officers, controllers, auditors and Budget Direction in Morocco.
- GID traces all stakeholders' modifications over each act of public expenditure and divides tasks among the stakeholders.

- Each (agent, service, organization) is held accountable for his duties.
- Electronic timestamping of the system GID makes it easy for auditors to determine irresponsibility, in case of litigation.
- GID enhances internal accountability between local offices.
- GID corrects automatically the fiscal mistakes, because of its automatized rubrics.
- GID counts days for all offices to respond in due time.

### Participation

- GID-CIBLE is already an existing rubric within the system that receives the users' suggestions.
- The System GID encourages the users to participate in decision-making for efficiency and good management of public expenditure in Morocco.
- It intervenes all the stakeholders of public expenditure to participate in fiscal visions through dashboards, extracted from the system.

### Responsiveness

- GID allows for the processing of budget acts and operations, in real-time.
- GID reduces fragmentations related to coordination and transaction.
- GID records time and date of expenditure acts; therefore, acts processing is time due on the system.
- It enables a rapid change of data between offices.
- GID enhances responsiveness because there is one input and one output in the expenditure management chain.
- GID accelerates act processing in Morocco.
- The accuracy of the system accelerates acts and few rejections are returned from the General Treasuries.
- The dematerialized archive of the GID makes it easy to look for information (time and effort).
- Budget acts can be validated and processed in less than five minutes from the central authorities.
- Electronic consultation of budget acts advances their execution rapidly.

### Strategic Vision

- GID helps a lot to generate clear strategies and visions for the management of public expenditure in Morocco.
- It helps to generate statistical dashboards from the system GID.
- The system GID helps to modernize public administration strategies and rationalize expenditure management in the country thanks to the extracted regional numbers and statistics.
- The platform GID-CIBLE of the system can promote decision-making, due to the availability of information.
- Statistics generated from the system help a lot to generate clear visions at the central level.

### Administrative Simplification

- GID simplifies procedures and transactions between back offices working on public expenditure in Morocco.
- GID streamlines transactions between offices without formalities and bureaucracies.
- GID prevents users to duplicate their works and tasks.
- It reduces all forms of complexities and cumbersome procedures between offices.
- GID accelerates fiscal processes in Morocco.
- Simplification limits fragmentation and streamlines workflows between offices.

### Information Security

- The platform GID provides optimal protection for data and work records.
- The authentication lock and password protocols safeguard information for users.
- The dematerialization of expenditure exchanges on the system GID protects the work folders against any electronic piracy.
- The encryption process of the GID system guarantees discreet decryption of messages and data between the integrated offices.
- GID is accessible on HTTPS, which is a high standard of Hypertext Transfer Protocol Security.
- Info security guarantees fair accountability between offices since all actions are timestamped.

## Decentralization

- GID decentralizes management of public expenditure on a common, integrated and unique system in Morocco.
- GID reduces the dependence of local offices to their central offices.
- The system GID regionalizes the management of public expenditure in Morocco.
- It allows local administrations for autonomous management of their budgets.

## Rule of Law

- GID is manipulated to execute law number 61-99 related to accountability and responsibility.
- GID system automatically watches over the rules of engagement.
- GID restricts any power abuse for personal gains (Corruption).
- GID maintains fairness and neutrality in the execution of budget acts.
- GID maintains moral ethics and practices among the stakeholders.
- GID unifies the interpretation of legal texts among the stakeholders.
- GID promotes law, regulation and integrity in the management of the Moroccan public expenditure.

## Modernization, Reform and Whole-of-Governance

- The silo based approach hinders the management of financial resources or other resources. The synergy between offices is a power and technology is a solution to unite workflows between offices for Good Governance.
- Modernization and reform become an urgent need if not an obligation to reach Good Governance, democracy, human and economic development and prosperity.
- Improvements are carried, day in day out, in the system to meet further requirements of the participants to reach further reforms.
- Modernization is an important tool for efficiency and effectiveness in public administration. Modernization reduces paper use, ambiguity and duplications.
- GID system is a reform to administration and public budget management.
- Workflow necessitates coordination and unity between local and national offices.

- Digitalization and modernization is a solution to increase the demands of international stakeholders for Good Governance and the demographic speedy rising demands.
- Public Administration must respond to the daily rising needs of the population for stability and sustainable development.

In this way, focus group discussions helped a lot the researcher to find answers the qualitatively asked questions in chapter 4, accordingly :

1. **How can the eGovernment Whole-of-Government Approach (eGovWGA) reform governance in The Moroccan Public Sector?**
2. **To what extent can the silo-based approach hinder Good Governance in the Moroccan public sector?**

In this way, the reactions of respondents towards the asked questions are summarized in three-word trees organized under one theme (Modernization, reform and WGA), referenced in table 4.24.

To summarize, the interviewees indicate that the eGovernment Whole-of-Government Approach is a real initiative that reformed a lot in expenditure management and other back offices in general. All the Integrated Systems (Passport delivery, RAMED, GID, BADR, GIR, GISRH... etc) have the power to federate the G<sub>2</sub>G operations and cut siloed cultures that constitute a real hindrance to Good Governance in the Moroccan Public Sector.

## 5.3 Quantitative Findings

### 5.3.1 The demographics

The instrument at the quantitative phase is designed to answer the quantitative questions, but a background information is recorded on the first page of the questionnaire, which includes six questions about the general background of the respondents, namely: their gender, age, academic level, profession, administration and region. Such background information is not needed for statistical tests, but it helps to collect a piece of general

information about the studied population (Kumar, 2010). Indeed, the demographic findings indicate that 61% of the respondents are males, where 39% are females, 55% of them are between 36-55 years old. 39.9% of the respondents have a BA degree, 21.3% are graduated with a Master or equivalent. Only 6.7 % of respondents have a baccalaureate degree, where 26.1% are with a BAC+2. However, only 3,6% of respondents have a Doctorate. 2.4% declared that they do not have a baccalaureate degree.

The distribution of the respondents by their profession indicates that 46% are administrators, 30% are technicians, and 13% of them are engineers; where 11% of the executives have responded to the questionnaire. 39% of the respondents indicate that they work as sub-authorizing officers. 28% are controllers of the public budget, 13% of them belong to Budget Direction at the ministry of finance, where only 20% of the respondents are authorizing officers<sup>2</sup>. These people are frequently executives working at the ministries or representatives of their ministries, such as the Walis, Governors, Directors or Delegates. Therefore, the staff working under their supervision are referred to as *sub-authorizing officers*.

These respondents have specified the regions they belong to since the questionnaire link is spread by the ministries throughout their database to the users of the GID system in the country. The researcher wants to make sure that his online link has circulated all over Morocco. Indeed, the researcher has received 25.7% of responses from public agents working in the region of Fes-Meknes, where 14.2% of responses are received from officers belonging to the capital region: Rabat-Sale-Kenetra, where the majority of ministries and administrations are located. Responses from the southern regions are very weak because 3.2% is registered from the regions Laâyoune-Sakia El Hamra and Dakhla-Oued Ed Dahab, respectively. The other Moroccan regions responded very weakly as well (between 5% and 9%) as being indicated in figure 4.31, accordingly. The scarcity in responses from these regions, perhaps is due to the indifference of the respondents, who are not interested to fill the survey or to their correspondent offices that have not received the link of the questionnaire.

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<sup>2</sup>They are authorized to process and execute their public budget on the system GID.

### 5.3.2 Factor Analysis (FA)

#### Exploratory Factor Analysis (EFA)

Before conducting any statistical test to explore the causal relationship between eGovernment WGA practices and Good Governance, the researcher used factor analysis technique on SPSS v.25 to explore the relationship between items and their manifest variables (factors), as well as their ability to overlap to their factors, according to the degree of their loading, when reduced from large number of variables into the minimum set of composite variables in a built construct.

**eGovWGA Variables (IVs):** A Principal Component Analysis (PCA) is used for factor examination, based on a promax rotation method, with an eigenvalue  $> 1.0$ . Table 4.4 and the scree plot 4.32 indicate that EFA groups the eight variables, with a Kaiser value above 70%, into two major components *eIntegration* and *eInteroperability*. The component matrix and the scree plot indicate respectively how the items of the survey loaded perfectly on *Component 1 eIntegration*, which is explaining approximately 60% of the occurring variance, and *Component 2 eInteroperability*, which is indicated only by 13.5% of variance, as specified by the total variance explained in the Total Variance Explained Matrix, extracted by SPSS. Exploratory Factor Analysis reveals how the eight items loaded perfectly to the two components *eIntegration* and *eInteroperability*, constituting meanwhile the *eGovWGA* as designed by the researcher in his measurement model.

**Good Governance Variables (DVs):** In fact, running EFA test on SPSS groups all the twelve variables, measuring Good Governance, into one main component, with a Kaiser value (KMO = 9.45) ( $p$ -value=0.00), which is highly significant. EFA reduces the twelve variables into one major component *Good Governance*, explaining approximately 60% of the occurring variance as specified in the total variance, explained in chart 4.5 and the scree plot in figure 4.33. In this way, EFA test extracted one component factor on the line curving on eigenvalues ( $> 1$ ), with a promax rotation. EFA reveals that the twelve variables measured in the ordinal scale could load only to one component, which is *Good*

*Governance*, as an umbrella key factor. In fact, the total significance of the correlation matrix is highly significant with a  $p$ -value  $< 0.01$ , and a KMO value of 0.945, indicating that the instrument model (questionnaire), explored by the researcher, is highly adequate and acceptable.

### **Confirmatory Factor Analysis (CFA)**

Confirmatory Factor Analysis CFA, on the other hand, is an important part withing Structural Equation Modeling (SEM), which looks at the internal consistency of developed items, constructs and factors, after being successfully classified previously into a group. Indeed, the measurement model of the following study underwent a firm evaluation through Convergent and Discriminant validities, testing the degree of fit between the developed items and their constructs, measuring what should be measured.

#### **Convergent Validity:**

**Individual Item Loadings** or the indicator's outer loadings explain a substantial part of each indicator's variance, usually by 70%. In other words, all the loadings score at higher than the minimum value of 0.70. However, item loadings between 0.6 and 0.7 are also acceptable in exploratory studies, when the constructs and items are designed for the first time. Individual Item Loadings higher than 0.70 are recommended though. Tables 4.9 and 4.10 indicate that the model, used in this study, succeeded the first exam since the reflectively constructed items (outer loadings) surpass the required rule of thumb ( $> 0.70$ ), put by Hair et al. (2017).

**Composite Reliability Test** measures the outer loadings of the variables and made sure that the items are not redundant in the measurement model, as the loadings scored between 0.70 and 0.95. High item loadings reflect, in turn, significant AVEs (Average variance extracted) of the Dependent and Independent constructs, which scored higher than 0.69, as indicated in tables: 4.36, 4.37, respectively.

**Average Variance Extracted** is an important indicator for Convergent Validity. It is the sum of the Squared Item Loadings divided by the number of items used for a construct. AVEs scores are equal to the Communalities of a construct calculated by SPSS or Amos. eGovernment WGA and Good Governance loadings reflect significant AVEs of constructs, which are desired at the minimum level of 0.50. Effectively, all the constructs reflect a high level of AVE, when the scores marked above 0.690, as indicated respectively by tables 4.36, 4.37.

#### **Discriminant Validity:**

**The cross Loadings** of the endogenous and exogenous variables did not exceed the items outer loadings on their constructs, on the same model. For example, the four items (EG1, EG2, EG3, EG4) loadings on their construct *eIntegration* surpass their cross-loadings on *eInteroperability*, as shown in table 4.11. In this way, the items (EG1, EG2, EG3, EG4) cannot measure any other construct more than they measure *eIntegration* on the scale. The same thing can be said about the items of *eInteroperability* as indicated in table 4.11. In this way, all the endogenous and exogenous items loaded highly on their constructs more than they load on others, which confirms the Discriminant Validity of the scale according to the rule of thumb, put by Hair et al. (2017).

**Fornell-Larcker correlation test** calculates the square root of each construct's AVE in correlation with all other constructs in the model, looking if the constructs of the model correlate highly with themselves more than they correlate with any other construct on the same model. The correlations are statistically significant since all the exogenous and endogenous highly correlate with themselves more than they correlate with any other variable on the same model, as being indicated in tables: 4.13 and 4.14 respectively. In this direction, Convergent and Discriminant Validities are statistically confirmed. Based on the dual EFA and CFA analysis, I consider that our developed instrument (questionnaire) is highly valid and reliable, following the predictions of the researcher.

### 5.3.3 Path Coefficient-Hypothesis Test

#### eGovWGA Effect on Good Governance

The hypothesized causal effect of eGovernment WGA practices and Good Governance variables are statistically supported, as indicated in table 4.20. eGovernment WGA has a positive and significant influence on:

Path Analysis Results	
1. Accountability ( $\beta = 0.61$ ).	8. Rule of Law ( $\beta = 0.61$ ).
2. Administrative Simplification ( $\beta = 0.63$ ).	9. Seamless Coordination ( $\beta = 0.72$ ).
3. Data information security ( $\beta = 0.72$ ).	10. Transparency ( $\beta = 0.61$ ).
4. Decentralization ( $\beta = 0.59$ ).	11. Cost Effectiveness ( $\beta = 0.63$ ).
5. Efficiency and Effectiveness ( $\beta = 0.58$ ).	12. Strategic Vision ( $\beta = 0.46$ ),
6. Participation ( $\beta = 0.55$ ).	<b>All with zero error probability (<math>p</math>-value =</b>
7. Responsiveness ( $\beta = 0.67$ ).	<b>0.00) .</b>

The lowest value  $<0.50$  is registered in the effect path of eGov WGA on Strategic Vision ( $\beta = 0.46$ ), but the effect is positive and significant ( $p$ -value = 0.00), though. The standardized ( $\beta$ ) values are close to (+1), indicating strong positive effects relationships, with 0 error probability ( $p$ -value = 0.00) between eGovWGA and Good Governance variables as indicated clearly by all the histograms in chapter 4. The second-order variables *eIntegration* and *eInteroperability* have a positive effect on the *eGovWGA* (first-order variable) ( $\beta = 0.57$ ) and ( $\beta = 0.52$ ) with a high level of significance ( $p$ -values = 0.00). The same model calculates a strong effect of *eGovWGA* on *Good Governance* ( $\beta = 0.76$ ), with a zero error probability ( $p$ -values = 0.00), supporting the first hypothesis. Therefore, the more we increase electronic *Integration* and *Interoperability* between governments, the more we enhance *Good Governance* ethics and values between offices. When I say Good Governance ethics, I mean all the twelve Good Governance variables measured in the study.

Blindfolding technique on PLS-SEM is able to measure the model predictive relevance, as it

has been predicted by the researcher before the measurement. Endogenous  $q^2$  values  $>0$  confirmed that the of the measurement model is relevant and accurate to the predictions of the researcher (Akter, D'Ambra, & Ray, 2011). Indeed, the Coefficients of Determination Test indicates that *Good Governance* is explained by *eGovWGA* with 59% ( $r^2 = 0.59$ ). On the other side, the effect size test of *eGovWGA* on *Good Governance* is a large effect ( $f^2 = 1.42$ ), according to the rule of thumb, put by Hair et al. (2017). To sum up, PLS Structural Equation Modeling (SEM) does confirm a large network of causal relationships between *eGovWGA* practices on *Good Governance*. Therefore, **H<sub>1</sub>: eGovernment Whole-of-Government Approach has a positive effect on Good Governance**, is accepted.

In this regard, the findings of study seem to echo the theory of the United Nations (2008b, 2014), reviewed in chapter 2. In reality, the findings of the study seem to ring true in the analysis of the United Nations, World Bank and OECD, which consider that eGovernment integrated systems could enhance governance mechanisms between offices. The analysis of data in relation to the third research question seems to follow on closely from Kettani & Moulin (2014), who found that eGovernment has a great potential to increase Good Governance between governments and citizens (G<sub>2</sub>C), based on the experience of eFez, reviewed in chapter 2. The findings as regards the effect of *eGovWGA* on *Good Governance* between public administrations seem to back up also the United Nations (2014) measured variables for Good Governance, when offices are integrated together (United Nations, 2008b, 2014).

### **The Causal Effects between Good Governance Variables under the Effect of eGovWGA**

Good Governance Correlation Matrix in table 4.14 indicates that there is a significant correlation between all Good Governance variables, since the correlation coefficients are all above ( $>0.5$ ). However, correlation shows only association, which is a symptom for a positive effect relationship, but it is still not sufficient to prove effect between these pairs. Therefore, the researcher resorted to PLS-SEM to calculate the path effects between the hypothesized Good Governance pairs, as it is highlighted in the literature review and focus group discussions:

### Good Governance Hypothesized Effects

- Decentralization → Responsiveness and Efficiency & Effectiveness
- Efficiency & Effectiveness → Cost Effectiveness
- Transparency → Accountability and Strategic Vision and Participation
- Participation → Accountability
- Administrative simplification → Seamless Coordination
- Rule of Law → Accountability and Data & Information Security.

The above-studied path effects are recorded on table 4.20, supported by their positive ( $\beta$ ) values and level of significance, as indicated by Hair et al. (2013; 2017) rule of thumb:

### Path Analysis Results

- Decentralization has a positive and significant effect on Responsiveness with ( $\beta = 0.23$ ) and Efficiency & Effectiveness ( $\beta = 0.65$ ).
- Efficiency & Effectiveness has a significant positive effect on Cost Effectiveness ( $\beta = 0.46$ ).
- Transparency has a significant and positive effect on Accountability ( $\beta = 0.44$ ), Strategic Vision ( $\beta = 0.26$ ) and Participation ( $\beta = 0.62$ ).
- Participation, in turn, has a significant and positive effect on Accountability ( $\beta = 0.65$ ).
- Administrative simplification has a significant and positive effect on Seamless Coordination ( $\beta = 0.76$ ).
- Rule of Law has a significant and positive effect on Accountability ( $\beta = 0.65$ ), and Data & Information Security ( $\beta = 0.69$ ).

**All with zero error probability ( $p$ -value = 0.00)**

Exception: Rule of law → Accountability ( $p$ -value=0.4), supported\*.

Coefficients of Determination ( $r^2$ ) extracted by PLS-SEM for these hypothesized effects revealed that all the endogenous variables (receiving effect) are moderately explained by their exogenous variables (exercising effect), as they do not exceed ( $r^2 < 0.75$ ) . The Effect

size test revealed that the highest effect is exercised by Administrative Simplification upon Seamless Coordination ( $f^2 = 1.4$ ), indicating that the more transactions and procedures are simplified between offices, the more coordination is streamlined between them, thanks to the use of eGovWGA. In contrast, the smallest effect sizes were indicated by Accountability and Decentralization effects over Responsiveness ( $f^2 = 0$ ), according to rule of thumb, put Hair et al. (2017).

All in all, the findings indicated that there is a causal relationship between Good Governance variables under the effect of eGovWGA; therefore, the hypothesis **H<sub>2</sub>: There is an influence between the values of Good Governance under the effect of the eGovernment Whole-of-Government Approach (eGovWGA) in the Moroccan Public Sector**, is accepted.

In this way, the quantitative findings seem to back up all the assertions of focus groups, document analysis and literature review, which indicate that Good Governance is a big package of ethics in which each ethical issue is related to another. The findings seem to support the accuracy of the qualitative themes, generalized perfectly to a larger sample in the quantitative phase (Creswell, 2002). The qualitative findings indicate that openness and transparency of transactions between offices are doomed to enhance accountability and participation between offices. Transparent dashboards can help a lot to generate statistics and strategic visions at the central level, in turn (United Nations, 2014). For instance, Ladegaard et al. (2003) found that the simplification of procedures and workflows has a positive impact on the reduction of red tape and duplications in workflow. The quali-quantitative findings of this study seem to pour true in the findings of the World Bank (1994), which consider that rule of law is an essential arm for executives to hold officers and offices accountable for their power abuse, irresponsibility and irresponsiveness. Similarly, Alshetewi et al. (2013) indicate that the rule of law, preserved by eGovernment systems, is needed for the protection of officers' information and data in back office transactions. Their study enhances that interoperability between government systems and services necessitates solid rules and legal frameworks to protect users' data from any kind of piracy or misuse because data, in the information age, is a national treasure.

### 5.3.4 Importance-Performance Analysis

The research question number 5: **What variables exhibit high importance and low performance in the construction of Good Governance, worth to be improved by managers?** incorporated the voice of the GID users into the assessment of

Importance-Performance analysis, looking for low performing constructs (scores below <30%, but with high importance >30%), to the target constructs. According to Hair et al. (2013), low performing constructs are a source of problems to their target constructs. More precisely, the researcher aims to discover if there are constructs, falling into the yellow quadrant (low performant, highly important) for managerial improvement, which seldom need only some few resources and logistics for better performance in the future.

Figure 4.63 indicated that *eIntegration* and *eInteroperability* are important and high performing in the making of *Good Governance*. The matrix showed that both predecessors fall into the green quadrant (*keep up the good work*). Therefore, a one-unit increase in *eIntegration* and *eInteroperability* performances will increase the performance of *Good Governance*, by the size of *eIntegration* and *eInteroperability*'s unstandardized total effects, if everything else remains equal (*ceteris paribus*). Consequently, both exogenous attributes function highly in the golden rectangular (Martilla & James, 1977), being highly important and performant, giving strength to *Good Governance* as a target construct. To sum up, we can say that electronic integration of offices and interoperability between them are very important assets for Good Governance improvement in public administration; hence, their performance is a prerequisite between offices.

Based on the responses of the participants and their satisfaction towards the system GID in Morocco, IPMA map in figure 4.64 indicated that Transparency is more important for the construction of Accountability, approaching to 0.60, which is a high score, accordingly. However, Rule of law and Participation are also performing as well, but they are less important (< 0.30) for the making of Accountability. In this regard, the matrix offers a clear map for managers of the GID system to grasp that Transparency is more performing and important for the construction of Accountability between offices, depending on the

effective relationship between these constructs. Hence, Transparency should be maintained more than Participation and Rule of Law in the making of Accountability (Martilla & James, 1977). In different words, the more workflows are transparent between offices, the more it becomes easy to spot irresponsibility and litigation, holding each other accountable<sup>3</sup>.

Based on the participants' quantitative responses, Decentralization and Efficiency & Effectiveness are highly important (>0.30) and performant (>0.30) predecessors. They are considered by IPMA, in figure 4.65, as more important than Administrative Simplification or Seamless Coordination in the making of Cost Reduction. Hence, Decentralization and Efficiency & Effectiveness should be maintained more than Administrative Simplification or Seamless Coordination in the construction of Cost Reduction by managers of public expenditure in Morocco (Martilla & James, 1977). Therefore, the more we decentralize and delegate workflows to the local agencies, the more we reduce extra charges of transportation, paper use and mobility. Efficiency & Effectiveness is also important for the reduction of duplication and costs between offices.

The IPMA matrix in figure 4.66 indicated that Rule of Law is highly important (>0.30) and performant (>0.30) in the construction of Data and Information Security, which rings true in the findings of Alshetewi, Goodwin, & De Vries (2013); Thuraisingham, Riet, Dittrich, & Tari, (2006) and Wimmer & Von Bredow (2002). A one unit increase in the maintainability of law will increase the maintainability of system security. The encryption law process of the integrated systems guarantees discreet decryption of messages and data between the integrated offices. Indeed, Rule of Law prohibits any piracy type of data between offices, due to the high authentication lock and password protocols between the users.

The IPMA matrix in figure 4.67 indicated that Decentralization performs in the green quadrant (*keep up*), being highly important (>0.30) and performant (>0.30) in the construction of Efficiency and effectiveness of workflows and transactions, according to the participants' satisfaction. Therefore, decentralization and delegation of workflows are very important to maintain efficiency in public administration.

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<sup>3</sup>Horizontal accountability or internal auditing.

The map in figure 4.68 places Transparency as a well-performing predecessor ( $>0.80$ ). It is important for the increase of Participation ( $>0.30$ ) among stakeholders. Therefore, a one-unit increase in the performance of Transparency will increase the performance of Participation by the value of the total effect, which is above 80%, relatively. Literature review and focus group discussions emphasized the protocols of transparency to encourage the participation of employees in the national strategies of the country. More particularly, the GID-CIBLE is already a transparent rubric, which receives the users' suggestions with the system GID in Morocco. The platform is a shared space for all the stakeholders of public expenditure to participate in fiscal visions through shared dashboards extracted from the system.

Accountability and Administrative Simplification figure in the map 4.69 as being highly important ( $>0.30$ ) and performant ( $>0.80$ ) in the construction of Responsiveness. However, Decentralization, Participation, Rule of Law and Transparency are less important in the making of Responsiveness ( $<0.30$ ). In general, all the constructs fall into safe areas (**Quadrent 1; Quadrent 2**), and no construct showed (high important; low performant) for managerial actions, according to Martilla & James (1977). In general, these results indicated that the GID users are highly satisfied with the performance of Accountability and Administrative Simplification in the construction of Responsiveness as the average of these aggregate variables is above the midpoint on IPMA grid. In other words, the users indicated that red tape and indifference constitute real hindrance to Responsiveness; therefore, workflows should be simplified and employees should be always held accountable for delay and irresponsiveness.

IPA is a clever strategic tool which can quickly inform planners about their customers' inquiries (important prioritisation areas), not only areas of well-performance. According to the GID customers, figure 4.70 reveals that Administrative Simplification is very important (0.70) and performant (0.80) in the construction of Seamless Coordination. Therefore, without simplification of administrative procedures and transactions, coordination between offices will suffer from delay and fragmentation, because of red tape and duplication (United Nations, 2008, 2014). In this way, IPMA grid informs decision-makers

that a one-unit increase in the performance of Administrative Simplification will streamline coordination and cooperation between offices, by the value of the total effect, which is above 80% relatively.

Figure 4.71 showed that Transparency is highly important (0.77) and performant (0.82) than Participation (Importance= 0.45; Performance = 0.76), in the making of Strategic Vision. The quantitative study indicated that Strategic Vision receives a direct effect from Transparency and Participation; however, IPMA adds more information about this effect. It specifies that these two effects are more important and performant in the production of Strategic Vision. Therefore, an increase in the performance of transparent and participatory management of the GID will increase the performance of strategic decisions and visions, carried by decision-makers at the central level. Consequently, there is no predecessor construct or variable, figuring in quadrant 4 (*concentrate here*) as being (high important and low performant) in the construction of its target construct (Afthanorhan & Ahmad, 2014; Chung & Yun, 2014; Martilla & James, 1977; Seng Wong, Hideki, & George, 2011).

To sum up, all the important constructs are also performing well in the making of their target constructs, under the effect of eGov WGA; therefore, **H<sub>3</sub>: There is no predecessor worth to focus on for managerial actions in the construction of Good Governance, by decision-makers of the system GID in Morocco**, is accepted. The GID decision-makers should allocate more resources to maintain the actual competitive stage of the GID system in Morocco. Decision-makers should encourage the use of eGovernment Whole-of-Government management in the country, producing more integrated systems between offices. Indeed, IPMA allows us to identify the GID's customers level of satisfaction, based on the performance of good governance values. It indicated also that *Good Governance* is a beautiful embroidery, knit with moral ethics, that sustain and maintain each other for the good management of public services. In this way, IPMA test renders useful information for managers, researchers and decision makers to evaluate any system quality; therefore, prioritizing or focusing on areas where improvement is needed in the future, without wasting taxpayers' money.

### 5.3.5 De jure and De facto Analysis

Question 6: **Is there any relationship between the de jure documentation and de facto outcomes of eGovernment Whole-of-Government Approach on Good Governance in Morocco?** is a mixed research question which can be answered when the qualitative and quantitative findings are merged up together. The last mixed methods question aims to compare between the eGovernment WGA environment, found on *de jure* rules<sup>4</sup> and its implementation in the Moroccan reality, for the promotion of Good Governance in back office deliveries. Literature review and qualitative findings indicated that the Moroccan public sector comprises *de jure* eGovWGA rules and programs, which ban ambiguity, indifference, irresponsibility, siloes, fragmentation, corruption, red tape and bad governance in general. On the other side, the quantitative findings also confirm that these *de jure* rules are translated into *de facto* outcomes and realities; therefore, eGovernment Whole-of-Government Approach, in Morocco is a *de facto* reality, and not an illusion, which is designed to enhance Good Governance and management in the country. In this way, the qual-quantitative findings ring true in the suggestions of Kaufmann & Kraay (2007) and UNDP (2009b), who are calling for the measurement of both *de jure* papers and *de facto* realities together, simply because formal documents are just ink on paper in some countries. to sum up, the following chapter answers all the relevant research questions and hypotheses, as they are presented in chapter 3.

## 5.4 Implications for Practice

The trend towards reforming the public sector has become an urgent need to achieve Good Governance for sustainable economic and human development. Public administration is the prop behind the success of investments, industries, technologies and services in every country. Therefore, a good service delivery in front offices is contingent on a good orchestration, communication and coordination between back offices. The

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<sup>4</sup>Institutional, legislative, judicial and constitutional documentation.

implementation of integrated systems would revitalize and orchestrate public offices, making them more efficient, transparent and service oriented rather than siloed, ambiguous, corrupted and dispersed entities. In this regard, the findings of this study must stir urgent reactions among leaders and stakeholders of the Moroccan public sector, especially the Ministry of Public Services and Reform of the Administration in Morocco to materialize and carry on the Moroccan project of *eMorocco*, which started in 2013, looking to integrate ICTs in all the Moroccan Public Administration.

The findings of the study indicated that there are only few integrated systems that join public administrations together in Morocco, where there are still many offices that work in isolation and ambiguity. Therefore, a culture of interoperability, interconnectedness and integration for integrity, transparency and accountability and rule of law between offices should substitute isolation, ambiguity, fragmentation and red tape in the public sector. Such ethics would help to promote instant efficiency and participation among offices for good governance and development in the future.

The findings of the study discovered that working in isolation and ambiguity stimulates bad governance and corruption, where integration is very healthy to integrity and Good Governance. The findings do unveil that Good Governance is a package of ethics in which each value enhances the other. More specifically, Importance-Performance (IPMA) results offer practical recommendations to the managers and decision-makers to consolidate their managerial commitments to improve all the ethics and values of Good Governance, since governance is an interwoven of moral ethics, in which each principle completes the other to embroider the image of development and prosperity.

Last and not least, the following study is unique in the way it manages to invent valid and reliable instrumentation, generalizable to measure any type of eGovernment Integrated management between offices in the world, including the private sector.

## 5.5 Study Limitations

The following study has faced some limitations which may have hampered its efficiency for more accurate results. The way that the researcher has limited the eGovWGA only in one integrated system (GID) may not be representative to the whole phenomenon. It may be better if other systems are measured in the study. The findings obtained the highest percentage of responses (55%) only from the age category of 36-55 years old. The youth majority may have different optimistic beliefs toward the implementation of eGovernment in Morocco than the old employees. Hence, their emotions could be affective to the study. Furthermore, the limitation in literature and the absence of instrumentation for eGovernment measurement and its evaluation in G<sub>2</sub>G operations pushed the researcher to invent his scale. A small sample size of survey respondents and focus group representatives are not sufficient to represent the whole Moroccan Public Administration. However, the following research has yielded concrete findings which may guide and torch further studies and investigations in the Administrative Sciences and Policy.

## 5.6 Recommendations

The findings of the study indicate that there are only few integrated systems that join public administrations together in Morocco, where there are still many offices that work in isolation and ambiguity. Therefore, it is recommended to foster a culture of interoperability, interconnectedness and integration for integrity, transparency and accountability between all the administrations through eGovernment Whole-of-Government systems and applications. Such ethics would help to promote efficiency and participation among offices for shared strategies in the future.

The findings reveal that rural offices lack basic Internet and technologies that could join them with other offices; therefore, it is recommended to build ICT capacities in rural areas.

The findings of the study indicate that there is some resistance from the staff, working with electronic applications, therefore, it is important to increase awareness regarding the

benefits of eGovernment benefits, regarding data and information security, in order to increase trust of employees in integrated systems.

The findings of the study indicate that electronic interoperability between offices is still accompanied with paper-based transactions though ;consequently, the Moroccan public sector is still afraid of eGovernment implementation and its new changes. In this regard, it is recommended to dematerialize all the administrative operations at once. Yes, it becomes urgent now to develop a holistic electronic infrastructure in all the Moroccan public administration. Indeed, there is no need to dematerialize expenditure management or human resources, where the rest is still all paper-based and archaic. A high level of clouding systems should be created for everyone to access into public information anywhere and anytime.

The following study targets only a unique integrated system in Morocco: GID as a case of study. Consequently, future studies may target other systems in order to generalize a holistic vision about the implementation of eGovernment technologies between offices.

The following study investigates the whole package of Good Governance in back office transactions, where future researches may focus only on a single value within the spectrum of Good Governance for a deep examination. Further studies may be conducted to connect the following findings of eGovernment interoperability and integration between back offices (G<sub>2</sub>G) and its direct impact on Good Governance in front office deliveries (G<sub>2</sub>C), for example. The following study is conducted about the last evolution stage of eGovernment, which is the integrated phase. But still, much more gap is left uncovered in the previous stages as well.

Future research should be expanded to reach potential variables between Government and Business transactions (B2B), for example.

The following study focuses on eGovernment G<sub>2</sub>G operations, where future studies may target the benefits of other field utilities, like mobile government *mGovernment*, which is now a new trend in the use of ICTs to connect together businesses, governments and citizens, for example.

## 5.7 Conclusion

The eGovernment Whole-of-Government Approach is based on the integration of information and communication technology (ICT) in Governments, especially the new technologies of integration and interoperability between offices. The study carries out a systematic assessment of the eGovernment Whole-of-Government Approach in Morocco, taking the GID system as a case for study. It sheds light on the abilities of eGovernment Whole-of-Government Approach to transform and reform the public sector by enhancing ethics of Good Governance between offices. More specifically, the study dwells on the challenge of the integrated systems for the promotion of inclusive workflows, interoperability and collaboration to cut bad governance, red tape, duplication, fragmentation and silo-based management in the public sector. The study indicates that the transformation of front office service delivery G<sub>2</sub>C is contingent on efficient back office G<sub>2</sub>G institutional frameworks, processes and coordination, supported by the implementation of innovative technologies. The study highlights the roles of the eGovernment Whole-of-Government Approaches in multi-stakeholder engagements towards collaborative governance within the public sector.

Through the literature review, the author tries to describe and theorise the endeavors of eGovernment technologies and its impacts on Good Governance, especially in back office coordination and communication. Through the review, the researcher tries to stir the previous findings, addressing the gaps in the research in order to answer the central research question of the research.

The researcher manages to track the last developments in eGovernment technologies and work on the last stage of its maturity stage, which is the integrated phase, where workflows can be coordinated between offices thanks to Web 2.0.

In the review, the author identified all the presented themes in the dissertation with the aim to identify their trends, including the relevant theory. We justified the adoption of Coordination theory as a theoretical framework to the study, defending the eGovernment Whole-of-Government Approach roles to enhance good governance ethics between public

institutions. It is used as a blueprint in the conceptualization of design approach and research questions.

This dissertation has investigated the roles of eGovernment Whole-of-Government Approach in enhancing the good governance capability between national and local offices, taking the Integrated System of Expenditure Management (GID) as a case for study in Morocco. The dissertation opts rather for a triangulated exploratory approach (qualitative and quantitative) so as to explore and investigate the integration of eGovernment holistic approaches for Good Governance in the Moroccan public sector. This new approach of methodology helped to explore the researched phenomenon and design an appropriate instrument to gauge the causal effects between exogenous and endogenous variables.

The exploratory approach sequentially allowed to export the themes and items of the study out of document analysis and focus groups, using Nvivo 12 software. At this stage, the researcher managed to synthesize the relevant firsthand texts produced, so far, about the GID system in Morocco, in order to collect an original and direct evidence on the specific event. In this way, the decoded themes and sentences yielded a rich examination and provided a general picture to the grounded theory for quantitative investigation, in the second phase. Document analysis yielded up sufficient relevant key themes and items for further discussion in the focus group discussions.

The researcher gathered the participants in close focus group sessions for further exploration and investigation. Focus group discussions helped to understand the themes and construct a valid and reliable instrument, generalizable into a group of participants to study the effect of eGovernment Whole-of-Government Approach (eGovWGA) on Good Governance at the quantitative phase.

In the quantitative part, Exploratory and Confirmatory Factor Analysis are the first tests used to analyze the factor structure of the original developed instrumentation, after it underwent a firm evaluation for convergent and discriminant validity, using the last version of Smart PLS software. Partial Least Squares Structural Equation Modeling (PLS-SEM) is a second generation statistical technique, used here to understand the causal relationships among research variables, thanks to the sophisticated multivariate data



analysis methods of Smart PLS. PLS-SEM allowed us to combine the based approaches of logistic and multiple regressions, multivariate data analysis, cluster analysis, multidimensional scaling and Confirmatory Factor Analysis (CFA) to confirm or reject the hypothesized effects in chapter 3.

The two approaches are merged together to answer the mixed method question at the end, comparing between the *de jure* documentation and *de facto* outcomes of eGovernment Whole-of-Government Approach on Good Governance in Morocco. The following table summarizes the research questions and their outcomes, accordingly:

**Table 5.1: Recapitulation**

<b>Question</b>		<b>Type</b>	<b>Answer</b>	<b>Measurement</b>
How can the eGovernment Whole-of-Government Approach (eGovWGA) reform governance in the Moroccan Public Sector?		Qualitative	Qualitative	Document Analysis Focus groups
To what extent can the silo-based approach hinder Good Governance in the Moroccan public sector?		Qualitative	Qualitative	Document Analysis Focus groups
Is there any effect of eGovernment Whole-of-Government Approach (eGovWGA) on Good Governance in the Moroccan Public Sector?		Quantitative	Qualitative Quantitative	Nvivo SPSS PLS SEM
Is there any influence between the values of Good Governance under the effect of the eGovernment Whole-of-Government Approach (eGovWGA) in the Moroccan Public Sector?		Quantitative	Qualitative Quantitative	Nvivo SPSS PLS SEM
What variables exhibit high importance and low performance in the construction of Good Governance, worth to be improved by managers?		Quantitative	Quantitative	SPSS PLS SEM IPMA
Is there any relationship between the de jure documentation and de facto outcomes of eGovernment Whole-of-Government Approach on Good Governance in Morocco?		Mixed Methods	Qualitative Quantitative	Document Analysis Focus Groups SPSS PLS SEM

In brief, the research findings of the study concluded that the silo-based approach hinders governance, communication and coordination between offices, where the eGovernment Whole-of-Government Approach is a solution to reform management, unite workflows, create synergy and increase Good Governance moralities between administrations. The thesis links the use of the Integrated system of expenditure management in Morocco as a successful story of eGovernment WGA technology to ban the silo-based archaic orientation of the public institutions as a new prospect to reform governance and management in Morocco, particularly prospects and trends of coordination and communication between offices.

eGovernment WGA has a positive and significant influence on ethics of Good Governance in back office transactions. Indeed, the eGovernment WGA technology has brought a moderate level of enhancement to the administrative governance, but still substantial efforts are needed for enhancing the governance of the public organizations. Therefore, the findings of the study pour true in the assumptions of the United Nations (2014), which considers that eGovernment integrated systems could enhance the governance mechanisms between offices.

The path effects between the hypothesized Good Governance pairs revealed, also, that there are positive and significant relationships between the values of Good Governance. The findings reveal that Good Governance is a big package of interrelated values in which each ethical value is interconnected with the other (ex: transparency increases accountability), and each variable affects the other directly or indirectly, when workflows are orchestrated together between offices through ICT.

Importance-Performance Analysis is used to answer the last research question number, measuring what variables exhibit high importance and low performance in the construction of Good Governance, worth to be improved by managers. The researcher aims to discover if there are constructs, falling into the critical quadrant (*low performant, highly important*) for managerial improvement, which seldom need only some few resources and logistics for better performance in the future, according to matrix. Based on the responses of the participants and their satisfaction towards the system GID in Morocco,

the IPMA maps indicate that there is no predecessor worth to focus on for managerial actions in the construction of Good Governance, by decision-makers of the system GID in Morocco. In this way, the findings revealed that decision-makers should keep up the good work of the integrated system, maintaining the eGovernment Whole-of-Government management between offices.

At the end, all the findings suggest that eGovernment Whole-of-Government Approach in Morocco is a de facto reality, and not an illusion, which is designed to enhance Good Governance and management in the country. In fact, the comparison between the de jure documentation presented in chapter 3 and its analysis in chapter 4 unveiled truly that there are real endeavors to reform governance in the Moroccan public sector and not just ink on the paper.

In this way, the following dissertation managed to construct and design a new valid and reliable scale that can measure any Integrated System in back office transactions. Therefore, this scale can be generalized to gauge the efficiency of any integrated system for the promotion of good governance between private or public offices including banking, education, health, human resources, finance sectors ...etc)

The study is unique in the way it concertizes the theoretical insights developed through the series of United Nations reports on eGovernment technologies, especially those issued between 2008 and 2014. The following study managed to validate in a quali-quantitative approach the theory of the United Nations, which suggests that if workflows are integrated through ICT, they could enhance the governance mechanisms between offices.

The study outweighs the holistic approach as a necessity to transform governments from stove piped working siloes into unified Whole-of-Government institutions that share services so as to increase efficiency, simplify procedures and reduce transaction costs and duplication among national and local governments.

In the final part, the researcher has proposed a framework and recommendations to enhance good governance between national and local public organizations. The thesis recommends the necessity to draw a clear national strategy for eGovernment capacity building to promote eGovernment Whole-of-Government approaches rather than

silo-based approaches. The study justifies the short-term (Good Governance) and long-term (Sustainable Development) gains beyond ICT integration and implementation in the public sector. Hence, the designers of administrative reform, decision-makers and public agents should consolidate their efforts to enhance eGovernment new integrated approaches and their use in a very sensitive spectrum, which is Public Administration.

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## Appendices

**Appendix A: Questionnaire in French**  
**(hard-copy)**

## Questionnaire sur le Système de Gestion Intégrée de la Dépense Publique (GID) au Maroc

Chers utilisateurs de système GID,

Votre collaboration Monsieur, Madame, dans cette brève enquête est vitale; surtout qu'il s'agit d'un sondage sur la qualité d'un système intégré et commun à l'ensemble des acteurs de la dépense publique au Maroc. Votre collaboration est très utile pour valoriser le fonctionnement de GID et ses rôles vis-à-vis des grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication intégrées. Merci d'avance pour le temps que vous allez consacrer à ce questionnaire. Les résultats de ce sondage seront traités de manière tout à fait anonyme.

**Important: Ce questionnaire ne sera rempli que par les utilisateurs du système GID au Maroc.**

**Sexe: \***

- Homme
- Femme

**Age: \***

- 18-35
- 36-55
- 56-65

**Niveau d'études: \***

- Collège/Lycée
- Bac
- Bac+2 (DEUG ou autre)
- Bac+3/4 (Licence, Maîtrise)
- Bac+5 (Master, écoles d'ingé, écoles d'arts...)
- Bac+7 etc (Doctorat, post-doc, thèse)

**Profession: \***

- Technicien
- Ingénieur
- Administrateur
- Cadre Supérieur

**Administration: \***

- Ordonnateur
- Sous-Ordonnateur
- Contrôleur
- Direction du Budget

**Votre Région : \*** .....

**Circulez SVP la case concernée dans chaque colonne**

<b>1 Pas du tout d'accord</b>	<b>2 Plutôt pas d'accord</b>	<b>3 Neutre</b>	<b>4 Plutôt d'accord</b>	<b>5 Tout à fait d'accord</b>
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**1. Décentralisation \***

1	Le Système GID permet une gestion décentralisée de la dépense publique sur un système commun, intégré et unique au Royaume.	1	2	3	4	5
2	Le Système GID permet de réduire la dépendance vis-à-vis de l'administration centrale.	1	2	3	4	5
3	Le Système GID régionalise la gestion de la dépense publique au Maroc.	1	2	3	4	5
4	Le système GID permet aux services locaux de jouir leur autonomie dans la gestion de leurs dépenses.	1	2	3	4	5

**2. Efficience & Efficacité \***

1	Le système GID réduit les risques liés aux actes de la dépense publique.	1	2	3	4	5
2	La dématérialisation de la dépense sur le GID permet une gestion efficace entre les comptabilités des différents intervenants.	1	2	3	4	5
3	Le système GID permet la réalisation des objectifs liés à la gestion de la dépense publique.	1	2	3	4	5
4	Le système GID participe à promouvoir la productivité et le rendement de la gestion.	1	2	3	4	5

**3. Coût-efficacité \***

1	Le système GID réduit les frais de papeterie et de correspondances postales.	1	2	3	4	5
2	Le Système GID réduit les ressources humaines affectées à l'exécution de la dépense publique.	1	2	3	4	5
3	Le système GID réduit les frais de déplacement et permet aux intervenants de consulter leurs dépenses en ligne.	1	2	3	4	5
4	le système GID assure des économies dans les coûts d'acquisition et de maintenance de l'application.	1	2	3	4	5

#### 4. Transparence \*

1	Toutes les opérations liées à la gestion de la dépense publique sont ouvertement consultables sur le GID.	1	2	3	4	5
2	Le système GID permet l'identification des actes depuis leur création.	1	2	3	4	5
3	Le système GID améliore la transparence dans la passation des marchés de l'état.	1	2	3	4	5
4	Le système GID offre une transparence budgétaire claire entre les intervenants locaux et nationaux.	1	2	3	4	5

#### 5. Responsabilisation \*

1	Le système GID permet une responsabilisation verticale et horizontale entre les ordonnateurs et les contrôleurs de la dépense publique.	1	2	3	4	5
2	Le système GID permet la traçabilité de tous les intervenants dans un acte de la dépense publique.	1	2	3	4	5
3	Le système GID permet le découpage des habilitations et de tâches dont chaque (agent, service, organisme) est tenu responsable.	1	2	3	4	5
4	L'horodatage électronique de GID facilite aux responsables la détermination des responsabilités en cas de litige.	1	2	3	4	5

#### 6. Participation \*

1	Le système GID encourage la participation des utilisateurs à l'amélioration collaborative de la qualité des services rendus.	1	2	3	4	5
2	Le système GID réceptionne les propositions des intervenants pour une gestion efficace de la dépense publique.	1	2	3	4	5
3	Le système GID permet de faire participer tous les intervenants dans la gestion de la dépense publique.	1	2	3	4	5
4	Tous les intervenants du GID participent aux processus décisionnels de la dépense publique du Pays.	1	2	3	4	5

#### 7. Réactivité \*

1	Le système GID permet le traitement des actes et des opérations en temps réel.	1	2	3	4	5
2	La plateforme d'assistance technique est réactive en cas d'arrêt ou de panne du système GID.	1	2	3	4	5
3	Le système GID restreint les fragmentations de communication et de coordination pour un traitement rapide des actes.	1	2	3	4	5
4	La consultation électronique des actes sur le GID avance leurs exécutions.	1	2	3	4	5

## 8. Vision Stratégique \*

1	Le système GID permet de générer une vision globale et centralisée sur l'exécution des dépenses publiques.	1	2	3	4	5
2	Le système GID permet l'établissement des stratégies de modernisation de l'administration pour un développement économique et social.	1	2	3	4	5
3	Le système GID permet de réviser les stratégies financières de chaque région vis-à-vis la rationalisation de dépenses publiques.	1	2	3	4	5
4	La plateforme GID-CIBLE favorise une meilleure prise de décision sur la base d'une information disponible en temps réel.	1	2	3	4	5

## 9. Simplification Administrative \*

1	le système GID simplifie les circuits et les procédures d'exécution de la dépense.	1	2	3	4	5
2	le système GID simplifie la gestion de la dépense entre les intervenants sans formalité et bureaucratie administrative.	1	2	3	4	5
3	Le système GID évite aux utilisateurs la duplication du travail et de tâches.	1	2	3	4	5
4	Le système GID réduit toutes les formes de complexité et de lourdeurs des procédures.	1	2	3	4	5

## 10. Coordination Fluide \*

1	Le système GID permet la fluidité du processus d'exécution des dépenses publiques.	1	2	3	4	5
2	Le système GID assure la continuité et la hiérarchisation du travail sans blocage.	1	2	3	4	5
3	Le système GID permet l'échange électronique rapide des données et des actes entre les utilisateurs.	1	2	3	4	5
4	L'interopérabilité sur le GID offre une coordination fluide entre les intervenants.	1	2	3	4	5

## 11. La sécurité des données et de L'information \*

1	Le système GID offre une protection optimale pour votre dossiers et données du travail.	1	2	3	4	5
2	La serrure numérique et votre mot de passe sécurisent vos transactions électroniques sur le GID.	1	2	3	4	5
3	La dématérialisation des échanges sur le GID vise une efficacité protégée contre toute menace électronique étrangère.	1	2	3	4	5
4	Le processus du chiffrement sur le GID garantie un déchiffrement discret d'échanges, de messageries et de données entre les utilisateurs intégrés.	1	2	3	4	5

## 12. L'Etat de Droit

1	Le système GID permet de restreindre les utilisateurs aux abus de leur pouvoir administratif pour un bénéfice personnel (la corruption).	1	2	3	4	5
2	Le système GID permet d'instaurer l'équité et la neutralité dans le traitement des actes budgétaires.	1	2	3	4	5
3	Le système GID influence positivement le respect des lois et des règlements, la moralisation et la diffusion des bonnes pratiques entre les intervenants.	1	2	3	4	5
4	La dématérialisation de la dépense publique permet l'unification des interprétations des textes juridiques entre les intervenants.	1	2	3	4	5

## 13. L'intégration électronique \*

1	Le système GID intègre tous les gestionnaires de la dépense publique.	1	2	3	4	5
2	Le GID est une plateforme efficace pour une gestion fédérée entre les intervenants de la dépense publique.	1	2	3	4	5
3	L'intégration de différents intervenants sur le GID offre une synergie qui facilite la gestion de la dépense publique.	1	2	3	4	5
4	L'intégrité du GID offre une collaboration pangouvernementale (collaborative) efficace entre les intervenants de la dépense publique.	1	2	3	4	5

## 14. L'interopérabilité électronique\*

1	Le système GID définit les tâches et les responsabilités de chaque intervenant sur une interface interopérable et partagée.	1	2	3	4	5
2	L'interface du GID modélise un vocabulaire commun et compréhensible pour une interprétation unique entre les intervenants.	1	2	3	4	5
3	L'interface du GID standardise le format des données et les protocoles pour une interopérabilité efficace et sécurisé entre les intervenants.	1	2	3	4	5
4	L'interopérabilité du système GID offre une gestion pangouvernementale efficace entre les acteurs de la dépense publique.	1	2	3	4	5

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Merci d'avoir pris le temps de répondre à ce questionnaire.

5/5

**Appendix B: Questionnaire in English**  
**(hard-copy)**



Please circulate the convenient box in each column

<b>1 Totally disagree</b>	<b>2 Disagree</b>	<b>3 Neutral</b>	<b>4 Agree</b>	<b>5 Totally Agree</b>
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**1. Decentralisation \***

1	The GID System allows for a decentralized management of public expenditure on a common, integrated and unique system in the Kingdom.	1	2	3	4	5
2	The GID system reduces dependence to the central administration.	1	2	3	4	5
3	The GID System regionalizes management of public expenditure in Morocco.	1	2	3	4	5
4	The GID system allows local administrations for an autonomous management of their budgets.	1	2	3	4	5

**2. Efficiency & Effectiveness \***

1	The System GID reduces the risks associated with the acts of public expenditure.	1	2	3	4	5
2	Expenditure dematerialization on the GID system allows for an effective management between different stakeholders' accountancies.	1	2	3	4	5
3	The System GID allows all the stakeholders to achieve their objectives related to the management of public expenditure.	1	2	3	4	5
4	The System GID helps to promote productivity and performance in the management of public expenditure.	1	2	3	4	5

**3. Cost effectiveness\***

1	The System GID reduces paperwork and postal correspondence costs.	1	2	3	4	5
2	The System GID reduces the human resources allocated to the execution of the public expenditure.	1	2	3	4	5
3	The System GID reduces travel costs and allows stakeholders to view their expenses online.	1	2	3	4	5
4	The system GID ensures cost savings in the acquisition and maintenance of the application.	1	2	3	4	5

#### 4. Transparency \*

1	All transactions related to the management of public expenditure are openly accessible on the system GID.	1	2	3	4	5
2	The System GID allows for the identification of expenditure acts since their creation.	1	2	3	4	5
3	The System GID improves transparency in government procurement.	1	2	3	4	5
4	The System GID provides for a clear budget transparency between national and local offices.	1	2	3	4	5

#### 5. Accountability \*

1	The System GID allows for a vertical and horizontal accountability between the authorizing officers and the controllers of the public expenditure in Morocco.	1	2	3	4	5
2	The System GID traces all stakeholders' modifications over each act of public expenditure.	1	2	3	4	5
3	The System GID divides tasks and duties among the stakeholders, for which each (agent, service, organization) is held accountable.	1	2	3	4	5
4	Electronic timestamping of the system GID makes it easy for auditors to determine irresponsibility, in case of litigation.	1	2	3	4	5

#### 6. Participation \*

1	The System GID encourages users' participation to improve the quality of their services.	1	2	3	4	5
2	The System GID receives the users' suggestions for an effective management of public expenditure.	1	2	3	4	5
3	The System GID intervenes all stakeholders in the management of public expenditure.	1	2	3	4	5
4	All the GID users participate in decision-making processes of the Moroccan public expenditure.	1	2	3	4	5

#### 7. Responsiveness\*

1	The System GID allows for the processing of budget acts and operations in real time.	1	2	3	4	5
2	The GID technical support platform is reactive in case of a shutdown or failure of the system.	1	2	3	4	5
3	The System GID restricts all communication and coordination fragmentations for a rapid processing of budget acts.	1	2	3	4	5
4	The Electronic consultation of budget acts on the system GID advances their executions.	1	2	3	4	5

### 8. Strategic Vision \*

1	The System GID generates a national general vision on the execution of public expenditure in Morocco.	1	2	3	4	5
2	The System GID helps to modernize public administration strategies for an economic and social development.	1	2	3	4	5
3	The System GID allows for the revision of the financial strategies of each region, so as to rationalize expenditure management in the country.	1	2	3	4	5
4	The platform GID-CIBLE of the system can promote decision-making, due to the availability of information.	1	2	3	4	5

### 9. Administrative Simplification \*

1	The System GID simplifies procedures and transactions for the execution of public expenditure in Morocco.	1	2	3	4	5
2	The System GID simplifies expenditure management between offices without formalities and bureaucracies.	1	2	3	4	5
3	The System GID prevents users to duplicate their works and tasks.	1	2	3	4	5
4	The System GID reduces all forms of complexities and cumbersome procedures.	1	2	3	4	5

### 10. Seamless Coordination \*

1	The System GID allows for a seamless public expenditure execution process.	1	2	3	4	5
2	The System GID ensures workflow continuity and progression without obstruction.	1	2	3	4	5
3	The System GID enables for a rapid electronic exchange of data and actions between the users.	1	2	3	4	5
4	Interoperability on the system GID provides a streamlined coordination between the stakeholders.	1	2	3	4	5

### 11. Data and information Security \*

1	The System GID provides an optimal protection for your data and work records.	1	2	3	4	5
2	Authentication lock and password secure your electronic transactions on the system GID.	1	2	3	4	5
3	The dematerialization of expenditure exchanges on the system GID protect your folders against any electronic piracy.	1	2	3	4	5
4	The encryption process of the GID system guarantees a discreet decryption of messages and data between the integrated offices.	1	2	3	4	5

### 12. Rule of Law\*

1	The system GID restricts the user administrative power abuses for personal gains.	1	2	3	4	5
2	The system GID maintains fairness and neutrality in the execution of budget acts.	1	2	3	4	5
3	The system GID positively influences law and regulation respect, moral ethics and practices among the stakeholders.	1	2	3	4	5
4	Expenditure dematerialization unifies the interpretation of legal texts among the stakeholders.	1	2	3	4	5

### 13. Electronic Integration \*

1	The System GID integrates all managers of public expenditure in Morocco.	1	2	3	4	5
2	The System GID is an effective platform for a joined-up management of public expenditure between different stakeholders.	1	2	3	4	5
3	The integration of different stakeholders on the GID system offers a synergy, which facilitates expenditure management.	1	2	3	4	5
4	Electronic integration on the system GID offers an effective Whole-of-Government Collaboration among the stakeholders.	1	2	3	4	5

### 14. Electronic Interoperability\*

1	The System GID defines tasks and responsibilities for each stakeholder on an interoperable and shared interface.	1	2	3	4	5
2	The GID interface uses a common and understandable vocabulary for a unique interpretation among the stakeholders.	1	2	3	4	5
3	The GID interface standardizes data format and protocols for an efficient and secure interoperability between the stakeholders.	1	2	3	4	5
4	Interoperability on the GID offers an effective whole-of-government management of public expenditure between the stakeholders.	1	2	3	4	5

Email : [said.azelmad@usmba.ac.ma](mailto:said.azelmad@usmba.ac.ma)

**Thank you for taking from time to fill this questionnaire.**

**Appendix C: Online Questionnaire**  
**(soft-copy)**

## Questionnaire sur le Système de Gestion Intégrée de la Dépense Publique (GID) au Maroc.

Chers utilisateurs de système GID,

Votre collaboration Monsieur, Madame, dans cette brève enquête est vitale; surtout qu'il s'agit d'un sondage sur la qualité d'un système intégré et commun à l'ensemble des acteurs de la dépense publique au Maroc. Votre collaboration est très utile pour valoriser le fonctionnement de GID et ses rôles vis-à-vis des grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication intégrées. Merci d'avance pour le temps que vous allez consacrer à ce questionnaire. Les résultats de ce sondage seront traités de manière tout à fait anonyme.

Important: Ce questionnaire ne sera rempli que par les utilisateurs du système GID au Maroc. Cochez SVP la case concernée dans chaque colonne.

**\*Required**

### 1. Région: \*

*Mark only one oval.*

- Tanger-Tétouan-Al Hoceïma
- L'Oriental
- Fès-Meknès
- Rabat-Salé-Kénitra
- Béni Mellal-Khénifra
- Casablanca-Settat
- Marrakech-Safi
- Drâa-Tafilalet
- Souss-Massa
- Guelmim-Oued Noun
- Laâyoune-Sakia El Hamra
- Dakhla-Oued Ed Dahab

### 2. Age: \*

*Mark only one oval.*

- 18-35
- 36-55
- 56-65

### 3. Sexe: \*

*Mark only one oval.*

- Homme
- Femme

**4. Niveau d'études: \****Mark only one oval.*

- Collège/Lycée
- Bac
- Bac+2 (DEUG ou autre)
- Bac+3/4 (Licence, Maîtrise)
- Bac+5 (Master, écoles d'ingé, écoles d'arts...)
- Bac+7 etc (Doctorat, post-doc, thèse)

**5. Profession: \****Mark only one oval.*

- Technicien
- Ingénieur
- Administrateur
- Cadre Supérieur

**6. Administration: \****Mark only one oval.*

- Ordonnateur
- Sous-Ordonnateur
- Contrôleur
- Direction du Budget

**7. Décentralisation \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le Système GID permet une gestion décentralisée de la dépense publique sur un système commun, intégré et unique au Royaume.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le Système GID permet de réduire la dépendance vis-à-vis de l'administration centrale.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le Système GID régionalise la gestion de la dépense publique au Maroc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID permet aux services locaux de jouir leur autonomie dans la gestion de leurs dépenses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**8. Efficience & Efficacité \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID réduit les risques liés aux actes de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La dématérialisation de la dépense sur le GID permet une gestion efficace entre les comptabilités des différents intervenants.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID permet la réalisation des objectifs liés à la gestion de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID participe à promouvoir la productivité et le rendement de la gestion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**9. Coût-efficacité \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID réduit les frais de paperasserie et de correspondances postales.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le Système GID réduit les ressources humaines affectées à l'exécution de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID réduit les frais de déplacement et permet aux intervenants de consulter leurs dépenses en ligne.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
le système GID assure des économies dans les coûts d'acquisition et de maintenance de l'application.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**10. Transparence \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Toutes les opérations liées à la gestion de la dépense publique sont ouvertement consultables sur le GID.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID permet l'identification des actes depuis leur création.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID améliore la transparence dans la passation des marchés de l'état.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID offre une transparence budgétaire claire entre les intervenants locaux et nationaux.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**11. Responsabilisation \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID permet une responsabilisation verticale et horizontale entre les ordonnateurs et les contrôleurs de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID permet la traçabilité de tous les intervenants dans un acte de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID permet le découpage des habilitations et de tâches dont chaque (agent, service, organisme) est tenu responsable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L'horodatage électronique de GID facilite aux responsables la détermination des responsabilités en cas de litige.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**12. Participation \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID encourage la participation des utilisateurs à l'amélioration collaborative de la qualité des services rendus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID réceptionne les propositions des intervenants pour une gestion efficace de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID permet de faire participer tous les intervenants dans la gestion de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tous les intervenants du GID participent aux processus décisionnels de la dépense publique du Pays.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**13. Réactivité \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID permet le traitement des actes et des opérations en temps réel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La plateforme d'assistance technique est réactive en cas d'arrêt ou de panne du système GID.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID restreint les fragmentations de communication et de coordination pour un traitement rapide des actes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La consultation électronique des actes sur le GID avance leurs exécutions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**14. Vision Stratégique \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID permet de générer une vision globale et centralisée sur l'exécution des dépenses publiques.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID permet l'établissement des stratégies de modernisation de l'administration pour un développement économique et social.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID permet de réviser les stratégies financières de chaque région vis-à-vis la rationalisation de dépenses publiques.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La plateforme GID-CIBLE favorise une meilleure prise de décision sur la base d'une information disponible en temps réel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**15. Simplification Administrative \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
le système GID simplifie les circuits et les procédures d'exécution de la dépense.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
le système GID simplifie la gestion de la dépense entre les intervenants sans formalité et bureaucratie administrative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID évite aux utilisateurs la duplication du travail et de tâches.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID réduit toutes les formes de complexité et de lourdeurs des procédures.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**16. Coordination Fluide \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID permet la fluidité du processus d'exécution des dépenses publiques.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID assure la continuité et la hiérarchisation du travail sans blocage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID permet l'échange électronique rapide des données et des actes entre les utilisateurs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L'interopérabilité sur le GID offre une coordination fluide entre les intervenants.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**17. La sécurité des données et de L'information \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID offre une protection optimale pour votre dossiers et données du travail.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La serrure numérique et votre mot de passe sécurisent vos transactions électroniques sur le GID.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La dématérialisation des échanges sur le GID vise une efficacité protégée contre toute menace électronique étrangère.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le processus du chiffrement sur le GID garantie un déchiffrement discret d'échanges, de messageries et de données entre les utilisateurs intégrés.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**18. L' Etat de Droit \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID permet de restreindre les utilisateurs aux abus de leur pouvoir administratif pour un bénéfice personnel (la corruption).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID permet d'instaurer l'équité et la neutralité dans le traitement des actes budgétaires.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le système GID influence positivement le respect des lois et des règlements, la moralisation et la diffusion des bonnes pratiques entre les intervenants.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
La dématérialisation de la dépense publique permet l'unification des interprétations des textes juridiques entre les intervenants.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**19. L' intégration électronique \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID intègre tous les gestionnaires de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Le GID est une plateforme efficace pour une gestion fédérée entre les intervenants de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L'intégration de différents intervenants sur le GID offre une synergie qui facilite la gestion de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L'intégrité du GID offre une collaboration pangouvernementale (collaborative) efficace entre les intervenants de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**20. L'interopérabilité électronique \****Mark only one oval per row.*

	Pas du tout d'accord	Plutôt pas d'accord	Neutre	Plutôt d'accord	Tout a fait d'accord
Le système GID définit les tâches et les responsabilités de chaque intervenant sur une interface interopérable et partagée.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L'interface du GID modélise un vocabulaire commun et compréhensible pour une interprétation unique entre les intervenants.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L'interface du GID standardise le format des données et les protocoles pour une interopérabilité efficace et sécurisée entre les intervenants.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L'interopérabilité du système GID offre une gestion pangouvernementale efficace entre les acteurs de la dépense publique.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Merci d'avoir pris le temps de répondre à ce questionnaire.**

Powered by



## **Appendix D: Emailed Questionnaire Link**



Said AZELMAD &lt;said.azelmad@usmba.ac.ma&gt;

---

**Gestion Intégrée de la dépense Publique (GID).**

15 messages

**Said AZELMAD** <said.azelmad@usmba.ac.ma>

28 March 2018 at 21:37

Bcc: mail@maec.gov.ma, webmaster@madrpm.gov.ma, info@madrpm.gov.ma, divcom@men.gov.ma, webmaster@mcinet.gov.ma, dsi@mem.gov.ma, Ministere@mce.gov.ma, rfiqi@caramail.com, kissami@hotmail.com, dpar@minenv.gov.ma, contact@marocainsdumonde.gov.ma, info@mmsp.gov.ma, leministre@mcinet.gov.ma

Cher Monsieur, Madame,

J'ai l'honneur de solliciter votre aide Monsieur, Madame pour remplir ce sondage électronique sur la Gestion Intégrée de la dépense Publique (GID), diffusé pour l'ensemble des acteurs, participant dans la gestion intégrée la dépense publique (les Ordonnateurs ; sous-ordonnateurs ; comptables et direction du budget) au Maroc. Cette enquête est menée dans le cadre d'une recherche académique pour étudier l'impact de l'interopérabilité des systèmes intégrées (GID : cas d'étude) sur les grands réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

Le Questionnaire:

<https://goo.gl/dMgNc5>**Veuillez aidez et transférer le lien aux usagers de GID.****NB : vos réponses sont traitées de manière anonyme.**

Cordialement,

---

 **formulaire PhD.pdf**  
564K

---

**Mail Delivery Subsystem** <mailer-daemon@googlemail.com>

28 March 2018 at 21:37

To: said.azelmad@usmba.ac.ma

**Address not found**

Your message wasn't delivered to **rfiqi@caramail.com** because the address couldn't be found, or is unable to receive mail.

The response was:

550 Requested action not taken: mailbox unavailable



Said AZELMAD &lt;said.azelmad@usmba.ac.ma&gt;

---

**Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

1 message

---

**Said AZELMAD** <said.azelmad@usmba.ac.ma>

27 September 2017 at 13:20

To: noureddine.bensouda@tgr.gov.ma

Monsieur le Trésorier Général du Royaume,

Je vous prie, Monsieur, de bien vouloir donner vos instructions au responsable de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des participants dans la gestion intégrée de GID au Maroc : les Ordonnateurs ; sous-ordonnateurs ; comptables et direction du budget. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

Votre aide, Monsieur le Trésorier Général, serait très bénéfique aussi bien pour l'administration publique au Maroc que pour moi. En effet, elle apporterait beaucoup d'avantages et de facilités au niveau des déplacements et de leurs frais. L'étude serait précise et exacte, puisque seuls les utilisateurs participeraient à ce sondage, et ce d'une manière anonyme, à l'adresse suivante : <https://goo.gl/dMgNc5>

L'étude suivante appuie l'approche de l'ONU dans l'intégration des back-offices pour une interopérabilité intégrée entre les divers services administratifs dans le but de garantir une bonne gouvernance entre les gouvernements (G2G) avant (G2C).

En tant que, Monsieur le Trésorier Général, membre de l'ONU et fondateur du centre de recherche FONDAFIP au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

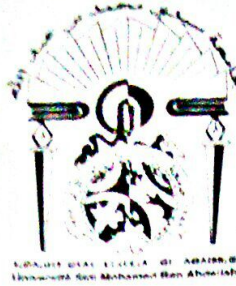
Veillez agréer, Monsieur, tous mes respects.

Virus-free. [www.avast.com](http://www.avast.com)

---

**2 attachments** **Le message.pdf**  
350K **formulaire PhD.pdf**  
564K

## **Appendix E: Faculty Form**



## طلب تسهيل مأمورية البحث

يشهد مدير مركز دراسات الدكتوراه بكلية الآداب و العلوم الإنسانية سايس - فاس :

**AZELMAD SAID**

أن الطالب (ة) : ازملط سعيد

المزاداد(ة) بتاريخ : 1981/10/14 في : تيزكيت إفران الجنسية : مغربي

رقم بطاقة التعريف الوطنية : DB13232

الرقم الوطني للطالب : 2199951282

مسجل (ة) بالكلية تحت رقم : 89CED/15

بالسنة الثالثة من في مركز دراسات الدكتوراه : " اللغات والتراث والتهيئة المجالية "

تكوين الدكتوراه : " اللغات والآداب والتواصل "

( محور الدراسات الإنجليزية )

(ت) يقوم حاليا ببحث علمي قصد تحضير شهادة الدكتوراه

في موضوع : " E-Government Whole-of-Government Approach for Good Governance : The Integrated Management System of Expenditure (GID) Initiative in Morocco

تحت إشراف الدكتور عبد الحميد انفيسي

برسم السنة الجامعية : 2016-2017

فالرجاء تقديم كل ما أمكن من المساعدة لتسهيل مأموريته (ها) .

فاس ، في : 26 يونيو 2017

مدير مركز دراسات الدكتوراه :  
اللغات والتراث والتهيئة المجالية

علي فلاح



## **Appendix F: Receipt Copies**

**Said AZELMAD**

Etudiant Doctorant à l'USMBA-Sais Fès.

Lab: Discourse, Creativity and Society Perceptions and Implications

Tel : 0671807573

Email : [said.azelmad@usmba.ac.ma](mailto:said.azelmad@usmba.ac.ma)



**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

71 MAI 2018

Monsieur le Trésorier Général du Royaume,

Je vous prie, Monsieur, de bien vouloir donner vos instructions au responsable de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des participants dans la gestion intégrée de GID au Maroc : les Ordonnateurs ; sous-ordonnateurs ; comptables et direction du budget. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

Votre aide, Monsieur le Trésorier Général, serait très bénéfique aussi bien pour l'administration publique au Maroc que pour moi. En effet, elle apporterait beaucoup d'avantages et de facilités au niveau des déplacements et de leurs frais. L'étude serait précise et exacte, puisque seuls les utilisateurs participeraient à ce sondage, et ce d'une manière anonyme, à l'adresse suivante : <https://goo.gl/dMgNc5>

L'étude suivante appuie l'approche de l'ONU dans l'intégration des back-offices pour une interopérabilité intégrée entre les divers services administratifs dans le but de garantir une bonne gouvernance entre les gouvernements (G2G) avant (G2C).

En tant que, Monsieur le Trésorier Général, membre de l'ONU et fondateur du centre de recherche FONDAFIP au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

Veuillez agréer, Monsieur, tous mes respects.

**Pièces Jointes :**

- CD : lien de Questionnaire sur support informatique.
- Lettre de Monsieur le directeur du centre doctorale (USMBA).

**Said AZELMAD**

**Said AZELMAD**

Etudiant Doctorant à l'USMBA-Sais Fès.

Lab: Discourse, Creativity and Society Perceptions and Implications

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Email : [said.azelmad@usmba.ac.ma](mailto:said.azelmad@usmba.ac.ma)

Le 05 Octobre 2017

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

Votre aide, Monsieur le Ministre, serait très bénéfique aussi bien pour l'administration publique au Maroc que pour moi. En effet, elle apporterait beaucoup d'avantages et de facilités au niveau des déplacements et de leurs frais. L'étude serait précise et exacte, puisque seuls les utilisateurs participeraient à ce sondage, et ce d'une manière anonyme, à l'adresse suivante : <https://goo.gl/dMgNc5>

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Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

Veuillez agréer, Monsieur, tous mes respects.

**Pièces Jointes :**

- CD : lien de Questionnaire sur support informatique.
- Lettre de Monsieur le directeur du centre doctorale (USMA).



**Said AZELMAD**

France le 11 Mai 2018

الرباط 11 مايو 2018

MRAFP

**Said AZELMAD**

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زوايت سدي ابيكلام ، France.

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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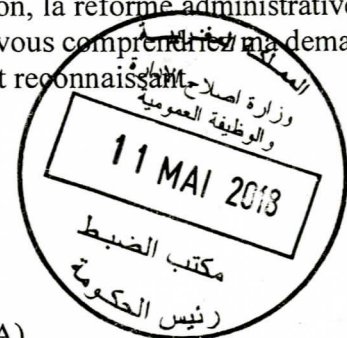
L'étude suivante appuie l'approche de l'ONU dans l'intégration des back-offices pour une interopérabilité intégrée entre les divers services administratifs dans le but de garantir une bonne gouvernance entre les gouvernements (G2G).

Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendrez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

Veillez agréer, Monsieur, tous mes respects.

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Le 05 Octobre 2017

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le *Tourisme du Transport Aérien de l'Artisanat et de l'économie Sociale. Secrétaire d'Etat chargé de l'Artisanat et de l'économie Sociale - Rabat -*

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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L'étude suivante appuie l'approche de l'ONU dans l'intégration des back-offices pour une interopérabilité intégrée entre les divers services administratifs dans le but de garantir une bonne gouvernance entre les gouvernements (G2G).

Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

Veuillez agréer, Monsieur, tous mes respects.

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**Said AZELMAD**



18 DEC 2017

Le 05 Octobre 2017

**Said AZELMAD**

Etudiant Doctorant à l'USMBA-Sais Fès.

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**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le *Directeur Général de la direction Générale des Impôts - Rabat -*

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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Le 05 Octobre 2017

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le *Ministre de l'Industrie, de l'Investissement, Du Commerce et de l'Economie Numérique - Rabat*

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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Le 05 Octobre 2017

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le *Ministre de la Santé,  
Rabat*

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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Le 05 Octobre 2017

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le

*Ministre des Finances - Rabat*

*18 DEC 2017*



Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

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Le 05 Octobre 2017

18/12/2018

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le *Ministre de l'Agriculture, de la pêche Maritime du Développement Rural et des Eaux et Forêts*.

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le Ministre de la Famille, de la Solidarité, de l'Egalité et du Développement social,

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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11 MAI 2018



Said AZELMAD

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**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le Ministre de l'Équipement, du Transport, de la Logistique et de l'Eau,

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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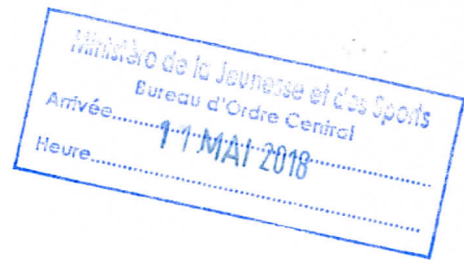
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**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le Ministre de la Jeunesse et des Sports,

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

Votre aide, Monsieur le Ministre, serait très bénéfique aussi bien pour l'administration publique au Maroc que pour moi. En effet, elle apporterait beaucoup d'avantages et de facilités au niveau des déplacements et de leurs frais. L'étude serait précise et exacte, puisque seuls les utilisateurs participeraient à ce sondage, et ce d'une manière anonyme, à l'adresse suivante : <https://goo.gl/dMgNc5>

L'étude suivante appuie l'approche de l'ONU dans l'intégration des back-offices pour une interopérabilité intégrée entre les divers services administratifs dans le but de garantir une bonne gouvernance entre les gouvernements (G2G).

Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

Veuillez agréer, Monsieur, tous mes respects.

**Pièces Jointes :**

- CD : lien de Questionnaire sur support informatique.
- Lettre de Monsieur le directeur du centre doctorale (USMBA).

**Said AZELMAD**

**Said AZELMAD**

Etudiant Doctorant à l'USMBA-Sais Fès.

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**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le Ministre des Affaires étrangères et de la coopération internationale,

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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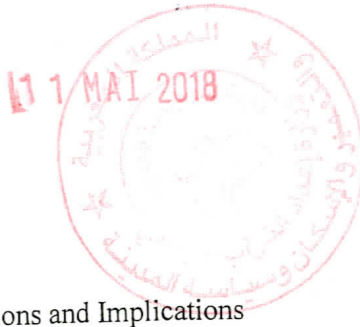
Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

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**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le Ministre de l'Aménagement du territoire, de l'Urbanisme, de l'Habitat et de la Politique de la Ville,

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

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Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

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**Pièces Jointes :**

- CD : lien de Questionnaire sur support informatique.
- Lettre de Monsieur le directeur du centre doctorale (USMBA).

**Said AZELMAD**



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**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le Ministre de l'Intérieur,

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

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Email : [said.azelmad@usmba.ac.ma](mailto:said.azelmad@usmba.ac.ma)

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le Ministre de l'Education nationale, de la Formation professionnelle, de l'Enseignement supérieur et de la Recherche scientifique,

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

Votre aide, Monsieur le Ministre, serait très bénéfique aussi bien pour l'administration publique au Maroc que pour moi. En effet, elle apporterait beaucoup d'avantages et de facilités au niveau des déplacements et de leurs frais. L'étude serait précise et exacte, puisque seuls les utilisateurs participeraient à ce sondage, et ce d'une manière anonyme, à l'adresse suivante : <https://goo.gl/dMgNc5>

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**Said AZELMAD**

11 ماي 2018



**Said AZELMAD**

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Le 05 Octobre 2017

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

Votre aide, Monsieur le Ministre, serait très bénéfique aussi bien pour l'administration publique au Maroc que pour moi. En effet, elle apporterait beaucoup d'avantages et de facilités au niveau des déplacements et de leurs frais. L'étude serait précise et exacte, puisque seuls les utilisateurs participeraient à ce sondage, et ce d'une manière anonyme, à l'adresse suivante : <https://goo.gl/dMgNc5>

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Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

Veuillez agréer, Monsieur, tous mes respects.

**Pièces Jointes :**

- CD : lien de Questionnaire sur support informatique.
- Lettre de Monsieur le directeur du centre doctorale (USMA).

**Said AZELMAD**



M 1 MAI 2018



**Said AZELMAD**

Etudiant Doctorant à l'USMBA-Sais Fès.

Lab: Discourse, Creativity and Society Perceptions and Implications

Tel : 0671807573

Email : [said.azelmad@usmba.ac.ma](mailto:said.azelmad@usmba.ac.ma)

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le Ministre de la Culture et de la Communication,

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

Votre aide, Monsieur le Ministre, serait très bénéfique aussi bien pour l'administration publique au Maroc que pour moi. En effet, elle apporterait beaucoup d'avantages et de facilités au niveau des déplacements et de leurs frais. L'étude serait précise et exacte, puisque seuls les utilisateurs participeraient à ce sondage, et ce d'une manière anonyme, à l'adresse suivante : <https://goo.gl/dMgNc5>

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Pour encourager la recherche scientifique au service de l'innovation, la réforme administrative, et de la bonne gouvernance au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

Veuillez agréer, Monsieur, tous mes respects.

**Pièces Jointes :**

- CD : lien de Questionnaire sur support informatique.
- Lettre de Monsieur le directeur du centre doctorale (USMBA).

**Said AZELMAD**



5 OCT 2017

**Said AZELMAD**

Etudiant Doctorant à l'USMBA-Sais Fès.

Lab: Discourse, Creativity and Society Perceptions and Implications

Tel : 0671807573

Email : [said.azelmad@usmba.ac.ma](mailto:said.azelmad@usmba.ac.ma)

Le 27 Septembre 2017

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID:**

Monsieur le Trésorier Général du Royaume,

Je vous prie, Monsieur, de bien vouloir donner vos instructions au responsable de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des participants dans la gestion intégrée de GID au Maroc : les Ordonnateurs ; sous-ordonnateurs ; comptables et direction du budget. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

Votre aide, Monsieur le Trésorier Général, serait très bénéfique aussi bien pour l'administration publique au Maroc que pour moi. En effet, elle apporterait beaucoup d'avantages et de facilités au niveau des déplacements et de leurs frais. L'étude serait précise et exacte, puisque seuls les utilisateurs participeraient à ce sondage, et ce d'une manière anonyme, à l'adresse suivante : <https://goo.gl/dMgNc5>

L'étude suivante appuie l'approche de l'ONU dans l'intégration des back-offices pour une interopérabilité intégrée entre les divers services administratifs dans le but de garantir une bonne gouvernance entre les gouvernements (G2G) avant (G2C).

En tant que, Monsieur le Trésorier Général, membre de l'ONU et fondateur du centre de recherche FONDAFIP au Maroc, j'ai la parfaite conviction que vous comprendriez ma demande de votre collaboration dans cette étude. Je vous serais énormément reconnaissant.

Veillez agréer, Monsieur, tous mes respects.

Le 05 Octobre 2017

**Said AZELMAD**

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Lab: Discourse, Creativity and Society Perceptions and Implications

Tel : 0671807573

Email : [said.azelmad@usma.ma](mailto:said.azelmad@usma.ma)

**Objet : Demande d'aide pour la diffusion électronique d'un sondage sur le GID.**

Monsieur le *Ministre de l'Agriculture et de la Pêche Maritime*

Je vous prie, Monsieur, de bien vouloir donner vos instructions aux responsables de la Gestion Intégrée de la dépense Publique (GID) pour la diffusion électronique de mon sondage selon votre base de données à l'ensemble des délégations, administrations ou bureaux, relevant de votre ministère. Cette enquête, certes brève, est menée dans le cadre d'une recherche académique pour l'étude de l'impact de l'interopérabilité des systèmes intégrés (GID : cas d'étude) sur les grandes réformes de modernisation et de promotion de la bonne gouvernance par l'utilisation des nouvelles technologies et de la communication (e-gouvernement) au Maroc.

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Veillez agréer, Monsieur, tous mes respects.

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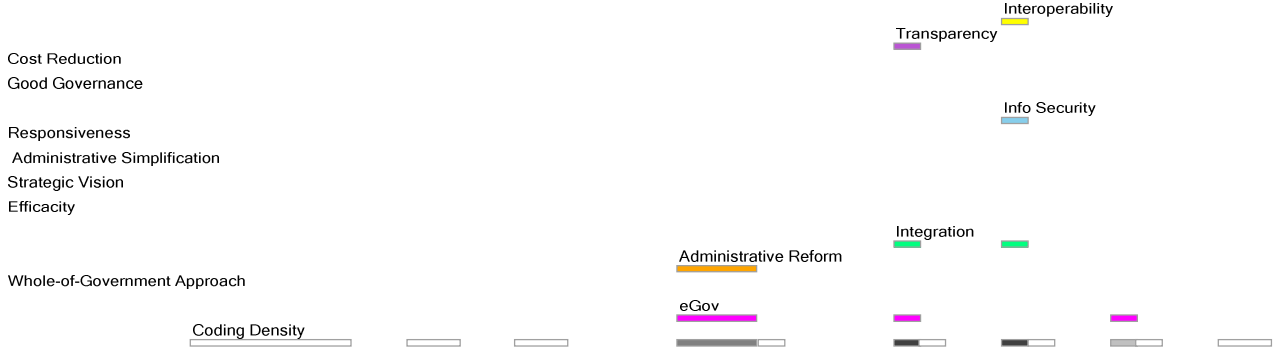
18 DEC. 2017

**Said AZELMAD**

# **Appendix G: Document Analysis**

## **Transcript/NVivo12**

<b>Name:</b> GID	
<Files\Brochure GID_Votre système de Gestion Intégrée de la Dépense> - \$ 4 references coded [2.72% Coverage]	
Reference 1 - 0.57% Coverage d'agilité, flexibilité et d'ouverture	
Reference 2 - 0.74% Coverage Capacité d'intégrer les évolutions stratégiques	
Reference 3 - 0.72% Coverage Capacité à s'interfacer avec d'autres systèmes	
Reference 4 - 0.69% Coverage Le Système de Gestion Intégrée de la Dépense	
<Files\GID_Votre système de Gestion Intégrée de la Dépense> - \$ 1 référence coded [4.24% Coverage]	
Reference 1 - 4.24% Coverage le système GID se veut être ..... un levier de modernisation de l'Administration et d'amélioration de la productivité ; un socle de mise en oeuvre des réformes budgétaires ; un outil de convergence vers l'assurance d'un service de qualité à tous les acteurs de la dépense	
<Files\La dématérialisation de la commande publique> - \$ 5 references coded [0.22% Coverage]	
Reference 1 - 0.02% Coverage d'améliorer la transparence et l'intégrité du processus d'achat public	
Reference 2 - 0.03% Coverage qu'une plateforme électronique unique, fédératrice, fiable et sécurisée dédiée à la commande publique	
Reference 3 - 0.02% Coverage dématérialisation de la gestion des marchés publics entamé depuis 2007	
Reference 4 - 0.02% Coverage la nouvelle plateforme de dématérialisation de la commande publique.	
Reference 5 - 0.11% Coverage	



Opérationnelle depuis 2009, la base de données des marchés publics est un entrepôt de données décisionnel qui propose des outils de consolidation des informations et procure aux ordonnateurs des informations concernant les marchés passés, leur permettant d'acheter dans de meilleures conditions de prévision et de visibilité.

[<Files\la\\_bonne\\_gouvernance\\_de\\_la\\_depense\\_publique> - § 7 références coded \[0.40% Coverage\]](#)

Reference 1 - 0.09% Coverage

L'adoption d'un système d'information plus cohérent dans le cadre de la mise en place du projet de gestion intégrée de la dépense (G.I.D) se traduira par une économie de moyens et de gestion, la réduction des coûts, l'amélioration de l'information financière et comptable.

Reference 2 - 0.04% Coverage

le lancement du Projet de Gestion Intégrée des Dépenses de l'Etat dont l'objectif est de moderniser l'exécution de la dépense publique ;

Reference 3 - 0.01% Coverage

Gestion Intégrée de la Dépense

Reference 4 - 0.04% Coverage

d'adopter un système d'information plus cohérent dans le cadre de la mise en place du projet de gestion intégrée de la dépense (G.I.D)

Reference 5 - 0.11% Coverage

Le projet de Gestion Intégrée de la Dépense publique se veut être un des leviers de modernisation de l'administration publique et un socle pour la mise en œuvre des réformes budgétaires et comptables, à travers une gestion optimale des dépenses publiques et une meilleure qualité de service aussi bien pour les fournisseurs que les partenaires de l'Etat.

Reference 6 - 0.06% Coverage

L'environnement actuel de la gestion de la dépense publique est caractérisé par des exigences de plus en plus accrues, en terme de qualité de service, de transparence, d'efficacité et d'efficience.

Reference 7 - 0.04% Coverage

Une entité projet GID, dédiée à la réalisation du projet, a été créée, au sein de la Trésorerie Générale du Royaume

[<Files\la\\_promotion\\_de\\_l'integrite\\_dans\\_les\\_marchés\\_publics> - § 3 références coded \[3.56% Coverage\]](#)

Reference 1 - 1.21% Coverage

Dans le cadre des grandes réformes de modernisation et de promotion pour la bonne gouvernance, le

Interoperability

Good Governance

Info Security

Responsiveness

Administrative Simplification

Strategic Vision

Coding Density

Cost Reduction

Integration

Whole-of-Government Approach

eGov

Transparency

Efficacity

Administrative Reform

projet GID se veut être le vecteur promotionnel de la gestion rationnelle des dépenses publiques et ce grâce à une utilisation efficiente des nouvelles technologies de l'information et de la communication.

Reference 2 - 0.79% Coverage

La mise en place du système de Gestion Intégrée des Dépenses (GID), permettra l'optimisation de la gestion de la dépense publique dans les meilleures conditions de fiabilité, célérité et efficacité.

Reference 3 - 1.56% Coverage

Ainsi le système GID devrait constituer à terme : - Un levier de modernisation de l'Administration. - Un socle de mise en œuvre des réformes budgétaires. - Un outil capable de fournir, en temps réel, l'information nécessaire aux prises de décisions.

Pour plus d'information sur le contexte de mise en place du projet GID, veuillez vous référer au contexte de mise en œuvre du programme GID.

<Files\LA RÉFORME DU CONTROLE DE LA DÉPENSE PUBLIQUE> - § 2 references coded [0.07% Coverage]

Reference 1 - 0.04% Coverage

d'adopter un système d'information plus cohérent dans le cadre de la mise en place du projet de Gestion Intégrée de la Dépense (G.I.D).

Reference 2 - 0.03% Coverage

La réforme doit être appuyée par la mise en place du projet relatif à la gestion intégrée de la dépense publique (GID);

<Files\OBJETIFS DU SYSTÈME GID> - § 2 references coded [3.77% Coverage]

Reference 1 - 2.75% Coverage

Dans le cadre des grandes réformes de modernisation et de promotion pour la bonne gouvernance, le projet GID se veut être le vecteur promotionnel de la gestion rationnelle des dépenses publiques ; et ce grâce à une utilisation efficiente des nouvelles technologies de l'information et de la communication.

Reference 2 - 1.03% Coverage

GID est un système d'information budgétaire et comptable unifié et commun à l'ensemble des acteurs de la dépense

<Files\Présentation du système GID Nadir Tijani> - § 5 references coded [1.03% Coverage]

Reference 1 - 0.33% Coverage

Un levier de modernisation de l'Administration et de rationalisation de la gestion publique

Reference 2 - 0.24% Coverage



Administrative Reform



Interoperability  
 Transparency  
 Cost Reduction  
 Good Governance  
 Info Security  
 Responsiveness

Strategic Vision

Administrative Reform

Coding Density

Administrative Simplification

Efficacy

Integration

Whole-of-Government Approach

eGov



Economie d'échelle dans les coûts d'acquisitions et de maintenance

Reference 3 - 0.21% Coverage

Harmonisation et unification des interprétations des textes

Reference 4 - 0.07% Coverage

Réduction des rejets

Reference 5 - 0.19% Coverage

Un système sécurisé et hautement disponible et agile

[<Files\p\press book GID Système de gestion Intégrée de la Dépense Publique> - § 9 references coded \[2.59% Coverage\]](#)

Reference 1 - 0.06% Coverage

une dématérialisation complète

Reference 2 - 0.47% Coverage

Les participants ont également fait une présentation sur le système de gestion intégré de la dépense (GID), qui est un système d'information budgétaire et comptable commun à l'ensemble des acteurs de la dépense publique.

Reference 3 - 0.29% Coverage

Le système GID, fruit de la volonté gouvernementale visant à impulser de l'efficacité et de l'efficience dans l'action de l'administration,

Reference 4 - 0.29% Coverage

le projet de gestion intégrée de la dépense (GID) apporte des innovations importantes en matière d'informatisation de la gestion publique.

Reference 5 - 0.34% Coverage

Cette étude s'est conclue sur une recommandation centrale : l'urgence de mettre en place un système d'information pour la Gestion Intégrée de la Dépense (GID).

Reference 6 - 0.47% Coverage

Le système projeté doit permettre une meilleure intégration entre les différents intervenants impliqués, ordonnateurs, sous ordonnateurs, direction du budget, contrôleurs et comptables de la Trésorerie générale du Royaume

Interoperability  
 Transparency  
 Cost Reduction  
 Good Governance  
 Info Security  
 Responsiveness  
 Administrative Simplification  
 Strategic Vision  
 Efficacy

Administrative Reform  
 Whole-of-Government Approach

eGov  
 Coding Density

Integration

Reference 7 - 0.22% Coverage	
assurer l'automatisation du suivi des crédits budgétaires en vue d'une exploitation optimale des données,	
Reference 8 - 0.23% Coverage	
Le SI GID est un levier de modernisation de l'Administration et d'amélioration de la productivité de l'Etat	
Reference 9 - 0.22% Coverage	
La dématérialisation des actes de gestion budgétaires et comptables traités dans le cadre du système GID	
<Files\Systeme de Gestion Intégrée de la Dépense> - \$ 6 references coded [2.21% Coverage]	
Reference 1 - 0.20% Coverage	
Le Système GID a pour objet l'automatisation du suivi comptable des crédits budgétaires	
Reference 2 - 0.66% Coverage	
Le traitement de la dépense continuera à être réalisé sur la base de documents sur support papier et attestés par des signatures à l'encre liquide. Le traitement par un acteur GID se fait sur la base des données numériques saisies et au vu du support papier signé par l'acteur émetteur.	
Reference 3 - 0.42% Coverage	
Toutes les mesures sont donc prises dans le Système GID pour garantir la totale conformité de ces données avec les documents papier dont elles représentent le contenu informationnel.	
Reference 4 - 0.49% Coverage	
L'enjeu majeur de la mise en œuvre du Système GID réside dans l'intégration des ordinateurs et sous-ordinateurs dans un système informatique de la dépense au même titre que les acteurs du Ministère des Finances.	
Reference 5 - 0.23% Coverage	
Le Système GID doit répondre aux préoccupations de suivi et de maîtrise de l'exécution de la dépense.	
Reference 6 - 0.21% Coverage	
Système GID, répondant aux attentes les plus importantes et les plus urgentes des acteurs	
<Files\Transparence GID> - \$ 3 references coded [0.40% Coverage]	
Reference 1 - 0.10% Coverage	
Le Système GID est un système d'information unifié et commun à l'ensemble des acteurs de la dépense publique qui permettra une gestion intégrée des actes de la dépense et ce, dans les meilleures conditions	

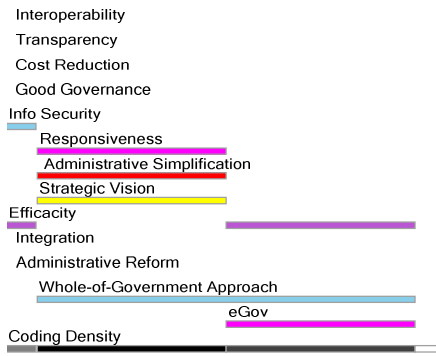
de fiabilité, de célérité et d'efficacité.

**Reference 2 - 0.15% Coverage**

GID a pour objectif d'accélérer le traitement des actes liés à la dépense publique dans le respect de la législation en vigueur, de simplifier et rationaliser les circuits et les procédures de son exécution, de mettre en concordance les comptabilités des différents intervenants et d'élaborer des tableaux de bord nécessaires à la prise de décision.

**Reference 3 - 0.15% Coverage**

Le projet de Gestion Intégrée de la Dépense publique se veut être un des leviers de modernisation de l'administration publique et un socle pour la mise en œuvre des réformes budgétaires et comptables, à travers une gestion optimale des dépenses publiques et une meilleure qualité de service aussi bien pour les fournisseurs que pour les partenaires de l'Etat.



## **Appendix H: Focus Group**

### **Transcript/NVivo12**

### Q.1. the System GID and Rule of Law.

Said

In your opinion, how the GID system enhances law and regulation for the promotion of integrity in the management of the Moroccan public expenditure?

Ouadie

Well, the system GID restricts the staff to use their power abuses for personal gains, due to the timestamping history. The system guarantees order of acts, which must be respected, accordingly. The system GID is fair and neutral in the process of budget acts. The general treasurers can't proceed the payments of the acts they want, because the system follows its electronic order.

Mohammed

Now, expenditure dematerialization through GID unifies the interpretation of legal texts among the different stakeholders, working on expenditure. The system influences the respect of law, regulation and moral ethics and practices among the stakeholders.

Abdelmoughit

The GID system enhances the execution of the rule of law, especially the one dictated by law number 61-99, made to establish the accountability of public officers working on public expenditure in Morocco, including either the controllers of the ministry of finance or the authorizing and sub-authorizing officers. Indeed, the article 3 from this law dictates that each authorizing officer, controller or public accountant is responsible for the acts he has taken, referred to or executed, from the date of his nomination to the end of his duties. I see that GID is made to execute this law.

Mohammed

Sorry, GID is made for all the rules and laws related to public expenditure, not only 61-99. The GID system automatically watches over the rules of engagement, liquidation and scheduling of public expenditure, the regulations on public procurement, laws and regulations relating to personnel management, the requisition orders that they have used in the payment of public expenditure, the rules on the recognition, liquidation and payment of public debts, and the recovery of public debts, as well as the management rules, the assets of the public body in their capacity as authorizing officers of receipts and expenses.

### Q.2.GID and Electronic Integration

Said

How do you perceive the electronic integration and the Whole-of-Government Approach of the GID system in your transactions?

Aberahim

The System GID is not still fully integrated between all managers of public expenditure in Morocco. Some offices are needed as partners in expenditure to rise effectiveness and good governance of the system. The system should include other administrations and offices, like the police offices, tax offices, Entrepreneurs, Banks and other stakeholders that have a minimum relationship with expenditure management.

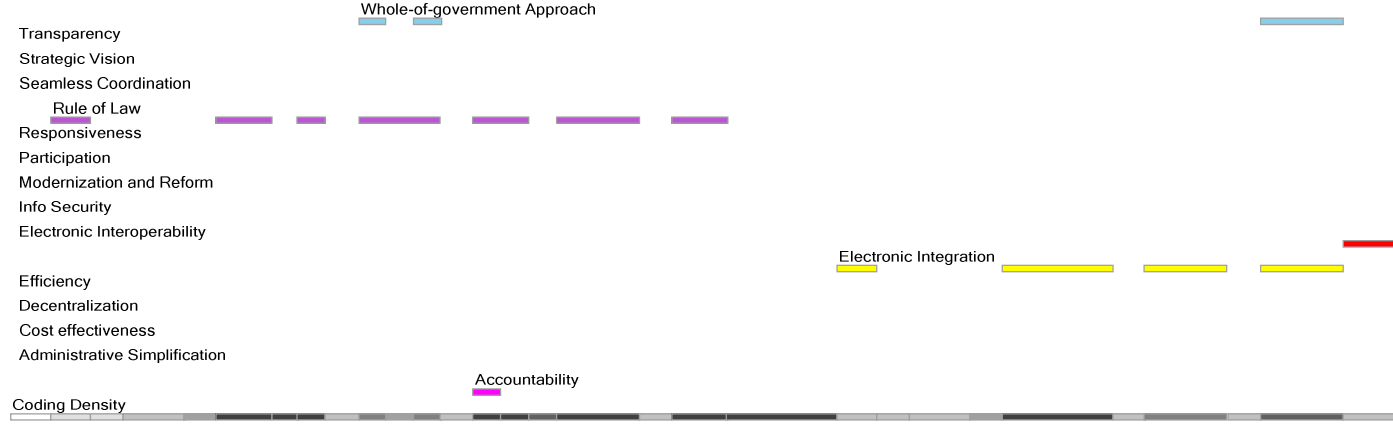
Soukaina

The System GID is an effective platform for a joined-up management of public expenditure. The integration of different stakeholders on the GID system offers synergy and coordination, which facilitates expenditure management.

Mohammed

Yes, electronic integration on the system GID offers a unified collaboration among the stakeholders. The work is dematerialized and federated between offices in a consistent and coherent manner between offices, no office is working for itself, in isolation. That's apparent from the name of the system: integrated !!

### Q.3. GID and Electronic Interoperability



How do you perceive the electronic interoperability and transactions of the GID system between your back-offices?  
 Ouadie  
 Sure that the data is now interoperable on the GID between all the participants. The System GID clarifies tasks and responsibilities for each participant that appear on his screen, but in an interoperable and shared interface.

Abdelmoughit  
 The GID interface uses a common and understandable language (French language) for a unique interpretation among the stakeholders, the technical language of the GID is unified and understood, as well. The GID interface standardizes data format and protocols for an efficient and secure interoperability between the stakeholders, I think, what appears for me as a sub-authorizing appears for the other.

Abdellah  
 Interoperability on the GID offers an effective unification and coordination between the public expenditure stakeholders, since language and forms are unified between offices on the GID.

#### Q.4. GID and Efficiency

Said  
 In your opinion how the GID system promotes efficiency and effectiveness of expenditure management in Morocco?

Ouadie  
 First, I believe that efficiency and effectivity is one value! we cannot separate them from each other, and for me they have the same meaning. So, the way that the system is effective in its management shows its efficiency and vice versa.

Abdelmoughit  
 I personally see that GID manages now to reduce risks and errors of expenditure management as being highly raised before the coming of the system. The staff could now rectify their mistakes online, as the system helps them, when it refuses confirmation. The visibility of information and data to other stakeholders on the screens makes mistakes easily directed and revised. Mistakes on papers took months to be rectified, especially when signed by a group of managers. It takes time to rectify calculations and resend the paper for signature again. I think that the System GID reduces, now, all the risks associated with the acts of public expenditure in Morocco. Well, I think that we can say that GID promoted productivity and management performance.

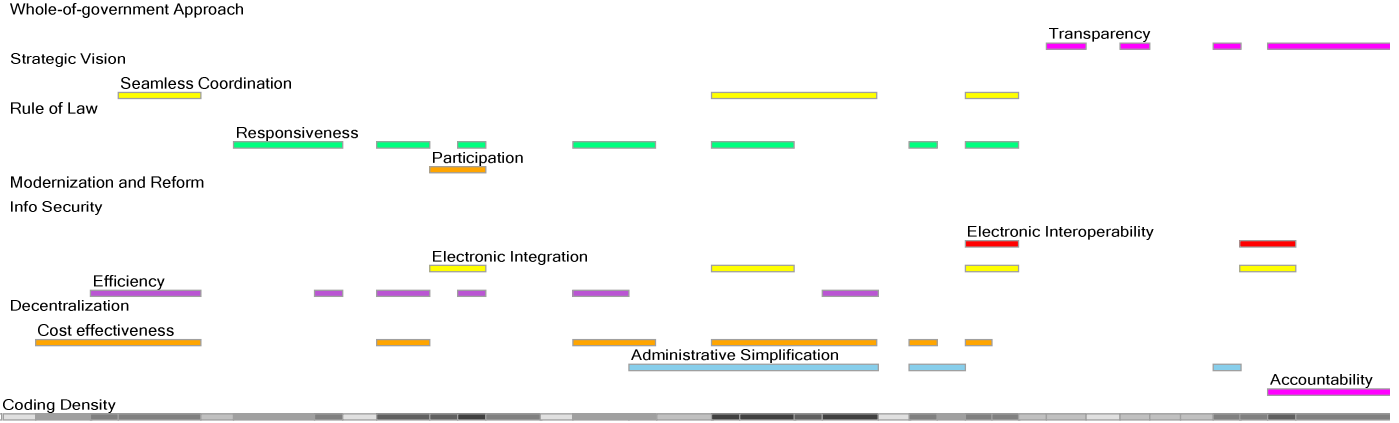
Abderahim  
 Productivity and performance has been augmented, since 2010 when expenditure management is dematerialized. The annual report of the GID indicated that it reached its designed objectives for this year. Expenditure dematerialization on the GID system allows for an effective management between different stakeholders' accountancies. The System GID allows all the stakeholders to achieve their objectives related to the management of public expenditure.

#### Q.5. the GID and Cost effectiveness

Said  
 In your opinion how the GID system reduces cost and generates economies between the integrated offices in Morocco?

Ouadie  
 The System GID reduces paperwork and postal correspondence costs. Before the coming of the GID, we used to rely on paper correspondences too much. The preparation of fiscal correspondences takes time, especially when we wait for executive' signatures, waiting to receive approval, wasting time and concentration in between. Managing and controlling a lot of paper documents is really a waste of time, energy and costs, especially when you have to revise all the modified numbers and texts.





**Abdellah**  
 But, we still rely expenditure acts online accompanied by their paper acts and their justification. We can talk about a zero paper-based expenditure management when all the workflows are dematerialized and digitalized, and when all the stakeholders are integrated. Up to now, there are some local communities who don't have access to internet or don't have computers though. It is only the personal effort of their staff, who use their own connection and laptops to process fiscal transactions to the provincial General Treasuries and Provinces, on the GID from their homes or cyber cafés, for example.

**Soukaina**  
 There is a lot of progress!! The GID system reduces a lot of time for us, as an online archive for all the processed transactions. The traditional filing systems waste time and energy to look for a historical document that is manually misfiled, for example. However, now, and from our desks, we can get all the transactions we performed, since 2010. All the full texts acts are searchable on the GID.

**Abdelmoughit**  
 The Paper-based processes, before the coming of the GID, used to be more linear, which means that employees used to stay with hands folded, waiting for their turn to work on the same document. One document circulate in chain. It is a waste of time and concentration!! Now, the staff are now integrated into many different operations, meanwhile. GID has removed all the linear nature of document chain processing, since all responsible parties have the same document on their screens for modification in faster, and efficient approval and sending.

**Abderahim**  
 I want to add to this, that the expenditure dematerialization on the GID processes reduces efforts and staff working on the same acts. The System GID reduces the human resources allocated to the execution of the public expenditure. The GID can't accept doing the same thing twice, it separates tasks for the staff, and simply two people for example cannot work on the same act. Even the controller's desk (General Treasurer) can't control the same expenditure act twice, thanks to the GID.

All the paper-based processes are slow, burdensome and error-prone by default. The GID has accelerated the fiscal processes in Morocco making them faster, responsive and accurate, making a lot of savings on the level of human energies, printer costs, and file storage. The System GID reduces travel costs and allows stakeholders to view their expenses online, without presenting themselves in line at the General Treasuries offices. Mistakes can be corrected by phone calls without going and coming, because everything is there on the screen!

**Soukaina**  
 We used to print and type tons of papers. The GID now has ready form to be filled easily. Scanning files attachments and justifications is making the task easier. Also, going numerical means going greener and cleaner. The system GID ensures cost savings in the acquisition and maintenance of the application, reducing delays in the processing of workflows between the orchestrated administrations. My office now looks bit organized and clean than before!

**Q.6. GID and Transparency**

**Said**  
 In your opinion, how the GID system promotes transparency and openness in the management of public expenditure in Morocco?  
**Abdelmoughit**

The visibility of the public procurement online made its handover easily, when the staff in charge is in vacation. All transactions related to the management of public expenditure are openly accessible on the system GID. The application improves internal auditing between all of the authorizing officers, sub-authorizing officers and the controllers of the public budget, before the coming of the national auditing committee. Visibility of data allows the integrated staff to work in an integrated self-auditing approach as one entity for

the correction of our mistakes together. The System is clear and transparent in the management of the public budget. Anyway, the input and output is transparent.

Ouadie

Transparency of acts on the GID improves accountability between offices, since all the mistakes are timestamped because of the username logins. GID makes it easy for executives to determine irresponsibility, in case of litigation, nobody can deny that it was not his mistake, except if he gave his password to somebody else!

Soukaina

I think now that there is now a clear transparency between the stakeholders of the public budget!

### Q.7. GID and Accountability

Said

In your opinion, how the GID system promotes accountability and responsibility in the management of public expenditure in Morocco?

Abdelmoughit

GID enhances more internal accountability or horizontal accountability between the local partners or stakeholders, before the vertical accountability of the central authorities over the delegated offices. The law of the GID is programmed to refuse abusive fiscal actions, like large numbers, for example the purchase orders (les bons de commande) are arrested at the allocation of 50.000 Dh. GID can't process any purchasing ticket beyond this price.

Ouadie

I see that Managers could correct each other in case of mistake, it's a way in which partners work in a synergies more than accountabilities. The System GID divides tasks and duties among the stakeholders, for which each (agent, service, organization) is held accountable.

Abdelmoughit

Regulation is called the rule of control "la règle de controle". All the rules of finance are integrated to the system GID in a user-friendly manner, so that any misuse of expenditure rubrics is not allowed automatically by the system. For example, the system can't process purchase orders (les bons de commande) beyond 200,000Dh systematically, except if it is allowed by the mother ministry (justified).

Abderahim

Now, I believe that the system GID automatically controls the misuse of the public money by its organized rubrics, so that the authorizing officers or the sub-authorizing officers can't disengage expenditure acts beyond its budgetary ceiling, dictated by its GID rubrics, for example:

- \* A maximum of 5000 DH is the budget allowed for staff numeration, for example.
  - \* A maximum 200,000 DH is the budget allowed for the procurement of office supplies, for example.
  - \* The purchase orders are limited automatically at the budgetary ceiling of 200,000Dh.
- Therefore, the authorizing officers or the sub-authorizing officers can't process any budgetary act out of the legislative act or rubric dictated by the system GID. The System is programmed to stop the operation in case of voluntary or involuntary misuse.

Ouadie

The GID unifies the understanding and the use of fiscal regulation all over Morocco. The system GID helps the officers in budget accountancies, because it is manipulated to calculate credits in coordination with the General Treasury, authorizing officers or the sub-authorizing officers. It performs the auto-control and prepares the budget situations for administrations clearly and transparently. Therefore, there is no room for fraud, litigation, misuse, or error.

Mohammed

The part of the call for bids, before the call for tenders is still not transparent in public expenditure management, since it still a project on which the stakeholders are working. It is a procedure for generating competing offers from different bidders looking for the entrepreneur to win the award of any business activity

## Whole-of-government Approach

Transparency  
Strategic Vision

Responsiveness  
Participation  
Modernization and Reform  
Info Security

Efficiency  
Decentralization  
Cost effectiveness

Accountability  
Coding Density

## Rule of Law

## Seamless Coordination

Electronic Interoperability  
Electronic Integration

## Administrative Simplification

(Marché Public) either in works, supply, or other services. The ministry is working on the automation of the process .... Electronic submission is the coming project on the GID.

Soukaina

The integration of the Court of Auditors (la cour des comptes) and the Budget department ( Direction des Budgets) to the GID interoperability is a way to enhance accountability and the execution of law 61-99 related accountability and responsibility of the authorizing officers, sub-authorizing officers and controllers.

Ouadie

The System GID allows for a vertical and horizontal accountability between the authorizing officers and controllers of the public expenditure in Morocco. The System GID traces all stakeholders' modifications over each act of public expenditure. Electronic timestamping of the system GID makes it easy for auditors to determine irresponsibility, in case of litigation.

### Q.8. GID and Participation

Said

In your opinion, how the GID system promotes your participation and other stakeholders in the management of public expenditure in Morocco?

Soukaina

GID encourages the participation of all the users to improve the quality of the services, offered by the platform GID. The GID offers a special rubric for all its participants to exchange information and participate in the promotion of the platform. All the suggestions are centralized to the office in charge at the ministry of finance.

Abdellah

The System GID receives the users' suggestions for an effective management of public expenditure. It intervenes all stakeholders in the management of public expenditure. All the GID users participate in decision-making processes of the Moroccan public expenditure, the platform GID-CIBLE is a good example, mentioned by my friend!

### Q.9. GID and Responsiveness

Said

In your opinion, how the GID system promotes rapid responsiveness and reaction towards the management of public expenditure in Morocco?

Soukaina

Well, I think that the electronic consultation of budget acts on the system GID advances their executions. The GID system promotes responsiveness, normally because there is only one entry and one output; therefore, the chain of budget workflow is known. The fragmentation of the work process can be detected by the system if the budget act is blocked somewhere in this chain.

Mohammed

The staff should be responsive towards the act process on the GID, since the system automatically counts days for the staff to respond to issue their public tenders in (45 days) and for controllers to launch payments in (15 days) maximum.

Abderahim

The System GID allows for the processing of budget acts and operations in real time. It restricts all communication and coordination fragmentations for a rapid processing of budget acts.

### Q.10. GID and Strategic Vision

Said

In your opinion, how the GID system can promote clear strategies and visions for the management of public expenditure in Morocco?

Abdelmoughit



I think that dashboard statistics, generated from the GID, do help decision-makers at the central level to modernize public administration strategies for an economic and social development, revising the financial strategies of each region to rationalize expenditures and credits dispatching to the regions.

Mohammed

The system centralizes all public budget information to generate a clear map and vision about the public expenditure all over the country. The statistics are used by the direction of budget to draw a development and economic vision all over the regions, as well.

Ouadie

I think that information generated from the system GID, is used for the elaboration of credit amounts delegated to of each region. The platform GID-CIBLE, for example, is made to generate ideas for central decision-making. The System GID can help to generate a national general vision on the execution of public expenditure in Morocco.

### Q.11. GID and Administrative Simplification

Said

In your opinion, how the GID system can help the GID system simplify procedures and transactions between back-offices working on public expenditure?

Abdelmoughit

The dematerialization of expenditure management on the GID has simplified all the procedures. Nowadays, the sub-authorizing officers are allowed to initiate budget acts under the amount of 20,000 DH only by an electronic signature on the GID, and the controllers can confirm only by a liaison form (fiche de navette) on the GID. This operation has much simplified the procedures and reduced a lot of costs (transportation and paper costs..).

Abderahim

Before, the coming of the GID, there were heavy procedures for example to recover the returned credits to the ministry of finance at the end of the year. Now the delegation of these credits is made easy on the GID between the national Treasurer, the local Treasurer and the sub-authorizing officers.

Abdelmoughit

The System GID simplifies and unifies procedures and transactions. The acts filled on the system are the same in Morocco. The printed acts include different rubrics for all the stakeholders to fill in. I think that all the burdensome and troublesome red tape is reduced by the coming of the GID. The System GID do simplifies expenditure transactions between offices without formalities and bureaucracies, and we hope that no papers will circulate at all very soon. The System GID reduces all forms of complexities and cumbersome procedures. The system print only necessary document for visa and stamping.

Mohammed

Before the coming of the system GID, officers sometimes can perform the same work twice (duplication of work tasks) because of miscommunication or personal conflicts. Now the system draws for each one his duties, preventing users to duplicate their works and tasks.

### Q.12. GID and Seamless Coordination

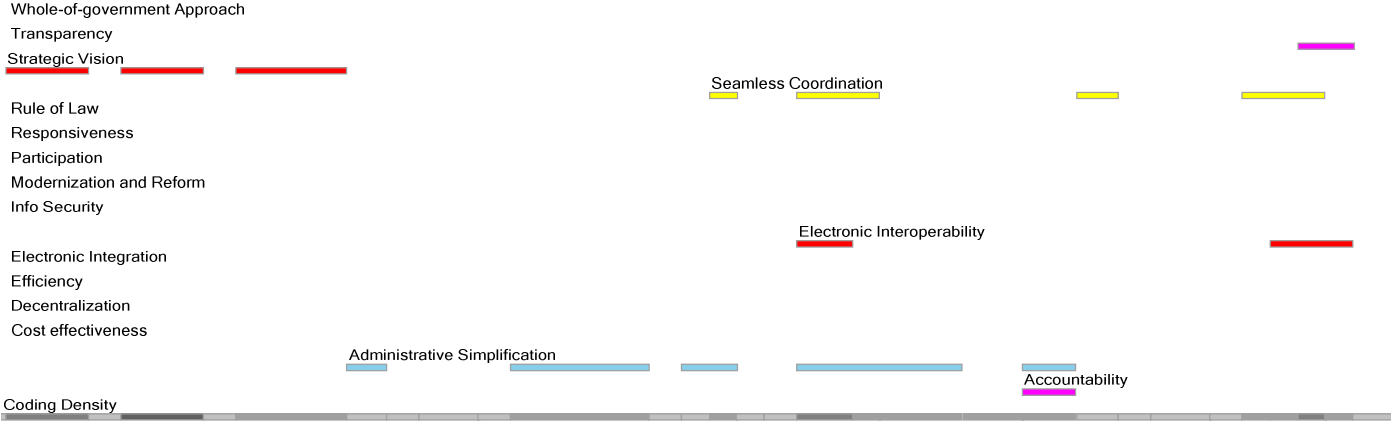
Said

In your opinion, how the GID system streamlines your coordination and transactions for a good management of public expenditure?

Abdelmoughit

I think that smooth coordination is one of the big objectives of the GID. GID would not be successful if there is a certain fragmentation, since 2010. The work is processed safely, except when there is a problem of internet connection between the users. The application needs a fast internet connection to tape expenditure acts and registration at the order office before their validation and control.

Soukaina



Coordination is not interrupted since all the tasks are separated on the system. Therefore, fragmentation or duplication can be detected easily.

Mohammed

The workflow is rapid not only on the local level, but on the central level as well, especially when credits and acts are validated by the central budget direction in less than five minutes. GID enables for a rapid electronic exchange of data and actions between the local and the national offices.

Abdellah

I think that interoperability and interchangeability of data and information is not fragmented or disjointed between the offices, and if there is a fragmentation it is only because of managerial delay in decision-making, act correction or control, for example.

### Q.13. GID and Info Security

Said

In your opinion, how the GID system promotes data and information transactions security against any type of piracy or misuse?

Ouadie

The System GID provides a protection to the data and work records. Authentication lock and password is used to secure each participant electronic transactions on the system GID. The dematerialization of expenditure exchanges on the system GID protect our data against any electronic piracy or misuse.

Soukaina

The encryption process of the GID system guarantees a discreet decryption of messages and data between the integrated offices.

Mohammed

The separation of tasks and habitations of each public agent cuts the duplication of tasks, enhances the security of information and its traceability.

Abdelmoughit

The GID application is accessible on HTTPS high standards of Hypertext Transfer Protocol Security protocols, where encrypted HTTP information and data is interoperable and transferable over a secure connection (https://, not only http://). In this way, the GID system relies on high security connection protocol layers such Transport Layer Security or Secure Sockets Layer to preserve the privacy, integrity and integration of data among the different stockholders and their secure authentication to the system.

### Q.14. GID and Decentralization

Said

In your opinion how the GID system promotes the decentralization of workflow and expenditure management in Morocco?

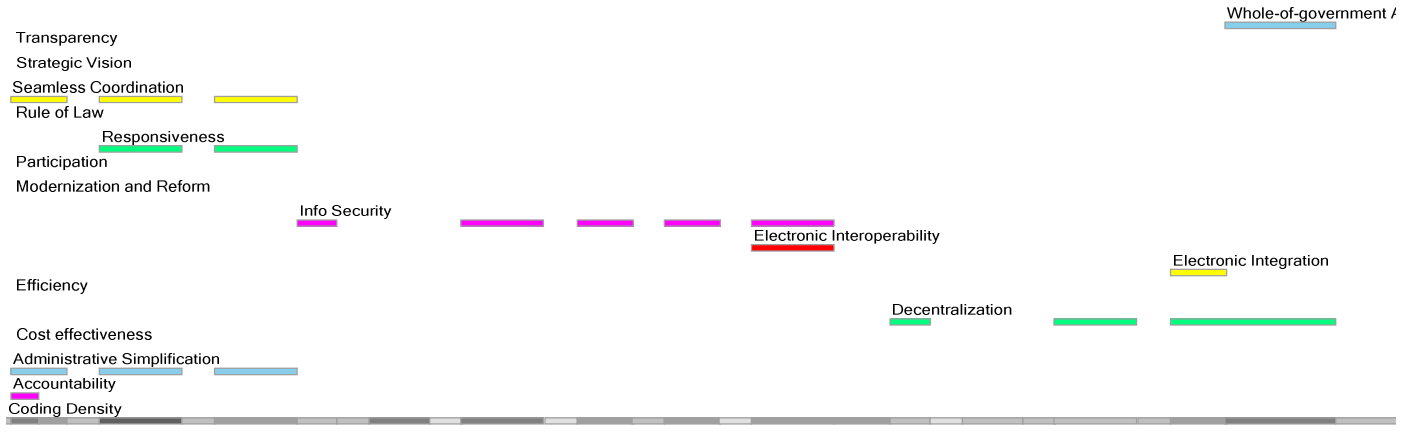
Abderahim

Well, the system GID allows now the management of expenditure at the local level. It reduces actually the concentration of expenditure management on the central level. Each region, municipality, province or delegation can coordinate its expenditure acts on the local level through a solid system GID.

Abdelmoughit

I see that The GID System allows for a decentralized management of public expenditure on a common, integrated and unique system in the Kingdom. In the context of the new philosophy of regionalization, launched by his majesty, we can say that Morocco has now a fully integrated, federated and decentralized system on the level of expenditure management. Regions could enjoy their dependence from the central authorities in the management of their local financial resources. The GID system allows local administrations for an autonomous management of their budgets.

Soukaina



I think that the system is not fully federated and integrated. The system should include other administrations and offices, like the police offices, tax offices, Entrepreneurs, Banks and other stakeholders that have a minimum relationship with expenditure management. For example, we do face problems with Entrepreneurs, since we don't have any information on their judicial background; they have sufficient credit to finish the projects or no...

Abdelmoughit

The decentralization of budget acts is accompanied by a swift responsiveness from the central office validation (visa), especially acts that should be engaged within 24 Hours by the Budget direction.

### Q.15.GID, Modernization and Reform

Said

How can the eGovernment Whole-of-Government Approach (eGovWGA) reform governance in The Moroccan Public Sector?

To what extent can the silo-based approach hinder good governance in the Moroccan public sector?

Abdelmoughit

The dematerialization of the Moroccan public expenditure through the GID system is a reform of administration and public budget management. Morocco has borrowed this system from Europe as a necessity to modernize and reform its administrative transactions to work in cohesion and coordination, because the fiscal management goes through different operations that call for harmony between offices: registration, planning, visa, approval, validation and execution of the budget. Added to the audit of the high authorities. This chain of work necessitates coordination and unity between local and national offices.

Ouadie

I personally see that the silo approach is no longer practicable for the management of financial resources or other sources. Synergy between offices is a power and technology is a solution to unite workflows between administrations. Modernization and reform becomes an urgent need if not an obligation to reach good governance, democracy, human and economic development and prosperity.

Abderahim

I think now that the dematerialization of public expenditure meet the current needs of public administration. Improvements are carried day in day out in the system to meet further requirements of the participants to reach further reforms. Modernization is an important tool for efficiency and effectiveness in public administration. It is a way to reduce paper use, ambiguity and duplications. Still some officers resist clarity and transparency to work in ambiguity because it serves their personal needs (corruption). Only, the reduction of paper burden is a big gain for administration.

Abdelmoughit

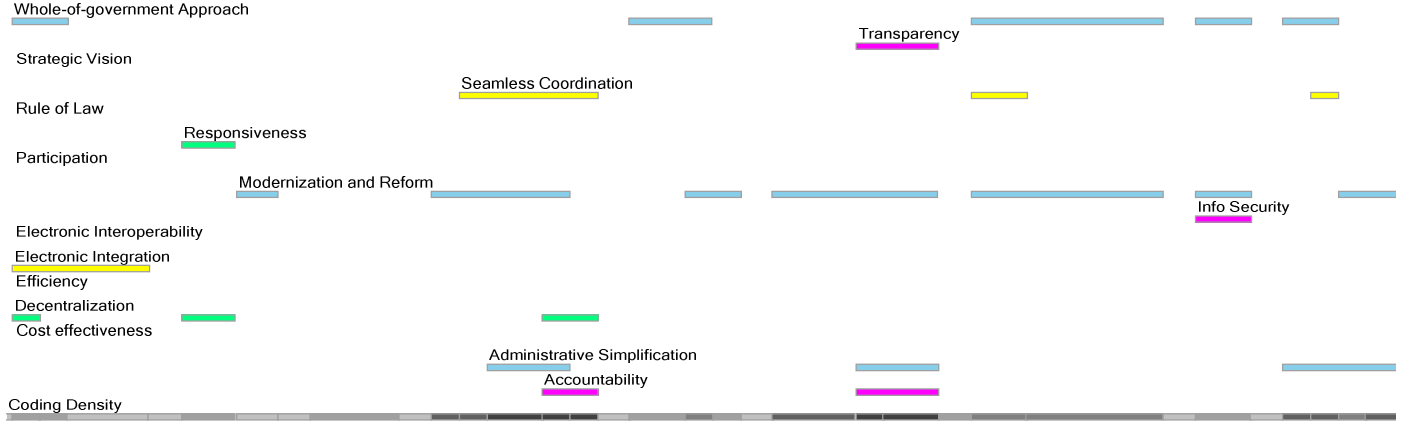
All the back office and front office system introduced by Morocco so far, have a good reputation in the management of workflows. Digitalization and modernization is a solution to increase the demands of international stakeholders for good governance and the demographic speedy rising demands. Solidarity between public offices becomes now urgent than before, as I said. Public administrations must respond to other needs of the African immigration into Morocco, foreign investments, citizen mobility from rural to urban places, security and justice. Such new issues entails modernization and reform pressures on public administration to meet stability and development.

Soukaina

I think now that dematerialization is a solution to respond to the ethics of secrecy, privacy and security of the large data, which constitutes a fear for any public institution.

Ouadie

All the paper transactions slow the flow of information and workflows. They are deemed to misplacement and lost. Papers slow workflows between offices (I didn't receive the document, it is at the Governor office for signature....). Unfortunately, the public expenditure in Morocco is not fully dematerialized as it is still relying on papers, added to the online transactions.



- Whole-of-government Approach
- Transparency
- Strategic Vision
- Seamless Coordination
- Rule of Law
- Responsiveness
- Participation
- Modernization and Reform
  - Info Security
  - Electronic Interoperability
  - Electronic Integration
  - Efficiency
  - Decentralization
  - Cost effectiveness
- Administrative Simplification
  - Accountability
  - Coding Density

## **Appendix I: Circular**

الرباط في: 22 جويلية 2013  
01 جويلية 2013

الملك محمد السادس  
رئيس الحكومة

منشور رقم: 9/2013



COURRIER ARRIVEE  
Economie

747 / DEN  
Date: 2013 يوليو 04

إلى

السيد وزير الدولة والسيدة و السادة الوزراء

و المندوبين السامين و المندوب العام و المندوب الوزاري

**الموضوع:** الإطار العام للتشغيل البيئي للأنظمة المعلوماتية والميثاق المشترك للبوابات الإلكترونية للإدارات المغربية.

سلام تام بوجود مولانا الامام.

وبعد، ففي إطار استراتيجية المغرب الرقمي الهادفة إلى جعل تكنولوجيا المعلومات حجر الزاوية في الاقتصاد الوطني ومصدرا للإنتاجية والقيمة المضافة للقطاعات الاقتصادية والإدارة العمومية وحافزا لتحقيق التنمية البشرية، وسعيا إلى خلق توافقية وتشاركية فعالين لأنظمة التكنولوجيات الحديثة بالإدارات والمؤسسات العمومية، تم، بفضل تضافر جهود مختلف الهيئات العمومية، إرساء الإطار العام للتشغيل البيئي للأنظمة المعلوماتية والميثاق المشترك للبوابات الإلكترونية للإدارات المغربية اللذين يشكلان قاعدة أساسية لتطوير المنظومة المعلوماتية الخاصة بالإدارات وجعلها تستجيب لمعايير الجودة والانسجام. كما تم وضعهما رهن إشارة العموم على موقع برنامج الحكومة الإلكترونية ([www.egov.ma](http://www.egov.ma)).

وقد أشرفت على وضع الإطار العام والميثاق المشترك المشار إليهما أعلاه، لجنة الإطار العام للتشغيل البيئي التي أحدثت سنة 2012 من طرف اللجنة بين-وزارية للحكومة الإلكترونية (CIGOV)، وهي اللجنة التي ستتولى مهمة تتبع وتقييم استخدامها وإدخال التعديلات عليهما عند الضرورة، إذ تقدم هذه اللجنة تقاريرها للجنة بين-وزارية للحكومة الإلكترونية.

COURRIER ARRIVEE  
S.G.

N° : .....  
Date: -3 JUL. 2013 2/1

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ومن أجل تفعيل هذا الإطار العام والميثاق المشترك المشار إليهما أعلاه بشكل يضمن تحقيق الأهداف المتوخاة من وضعهما، فإن جميع الوزارات والمؤسسات العمومية مطالبة بأخذهما بعين الاعتبار فيما يستقبل من المشاريع الخاصة بأنظمة التكنولوجيات الحديثة، وذلك بالشروع في تطبيق الإطار العام للتشغيل البيئي على جميع المشاريع الجديدة التي ستبدأ بعد تاريخ 31 يوليوز 2013، وكذا ملاءمة المواقع الإلكترونية الحكومية مع الميثاق المشترك في أجل أقصاه 31 أكتوبر 2013. كما أن هذه المؤسسات مدعوة إلى إلحاق الإطار العام والميثاق المشترك السالفي الذكر، بدفاتر تحملات المشاريع المستقبلية الخاصة بالأنظمة المعلوماتية والبوابات الإلكترونية.

وفي نطاق مراقبة تفعيل الإطار العام للتشغيل البيئي والميثاق المشترك، يمكن للجنة الإطار العام للتشغيل البيئي مباشرة مجموعة من الإجراءات التقييمية من قبيل :

- طلب معلومات من المؤسسات المعنية عن طريق وزارة الصناعة والتجارة والتكنولوجيات الحديثة التي تتكلف بمهام كتابة اللجنة. ويتعين على هذه المؤسسات الإجابة داخل أجل أقصاه 30 يوماً.
- افتتاح بعض المؤسسات عند الاقتضاء، وذلك بانتداب خبير للقيام بهذه المهمة، على أن يتم إخبار المؤسسة المعنية 30 يوماً على الأقل قبل بداية العملية، عبر مراسلة تتضمن حدود ونطاق مهمة الافتتاح وبرمجتها الزمنية، والأشخاص المكلفين بإنجازها والبوابات ونظم المعلومات المستهدفة، وتقوم وزارة الصناعة والتجارة والتكنولوجيات الحديثة بإبلاغ المؤسسة المفتوحة بتوصيات اللجنة. كما يتعين على الهيئات المفتوحة تنفيذ هذه التوصيات في أجل لا يتعدى 60 يوماً.

وستسهر وزارة الصناعة والتجارة والتكنولوجيات الحديثة من جهتها، على إعداد تقرير بالحصيلة السنوية لتنفيذ الإطار العام للتشغيل البيئي والميثاق المشترك، ونشره على موقع برنامج الحكومة الإلكترونية ([www.egov.ma](http://www.egov.ma)).

وعليه، فإنني أهيب بكم إلى تعميم هذا المنشور والإطار العام للتشغيل البيئي للأنظمة المعلوماتية والميثاق المشترك للبوابات الإلكترونية للإدارات المغربية المرفقين بهذا المنشور على كافة المصالح والمؤسسات التابعة لكم، وحثها على المشاركة الفاعلة في تفعيل مضامينه.

ومع خالص التحيات والسلام.

رئيس الحكومة  
  
عبد الإله ابن كيران