Association for Information Systems
AIS Electronic Library (AISeL)

EXAMINING THE INFLUENCE OF EXTERNAL STAKEHOLDERS ON IT GOVERNANCE: PERCEPTIONS OF IT EXECUTIVES

Saida Harguem,
University Laval, Quebec, Canada, saida.harguem.1@ulaval.ca

Égide Karuranga,
University Laval, Quebec, Canada, egide.Karuranga@fsa.ulaval.ca

Sehl Mellouli
University Laval, Quebec, Canada, sehl.mellouli@fsa.ulaval.ca

Follow this and additional works at: http://aisel.aisnet.org/mcis2014

EXAMINING THE INFLUENCE OF EXTERNAL STAKEHOLDERS ON IT GOVERNANCE: PERCEPTIONS OF IT EXECUTIVES

Harguem, Saida, University Laval, Quebec, Canada, saida.harguem.1@ulaval.ca

Karuranga, Égide, University Laval, Quebec, Canada, egide.Karuranga@fsa.ulaval.ca

Mellouli, Sehl, University Laval, Quebec, Canada, sehl.mellouli@fsa.ulaval.ca

Abstract

Information Technology (IT) governance decisions usually involve several stakeholders with divergent claims. Past research on IT governance focused on internal stakeholders' responsibilities and roles in IT governance decisions. However, we don't know much about external stakeholders' place in IT governance. Based on stakeholder theory, a qualitative research approach is adopted to determine the importance of different external stakeholders in IT governance by examining how they are prioritized in this context. Results suggested that external stakeholders' prioritization in IT governance context as perceived by IT executives vary according to IT decision domains. Moreover external stakeholders' influence over IT decision domains may be direct or indirect depending on their active role in IT activities or on their relationship with the organization as a whole. Implications of results are discussed.

Keywords: Stakeholder theory, IT governance, external stakeholders' salience, IT decision domains

1   INTRODUCTION

IT governance decisions usually involve several stakeholders with divergent claims. Stakeholders in IT governance context are groups who have either a responsibility for or an expectation from the enterprise's IT (IT-Governance-Institute, 2003). Past research on IT governance focuses on internal stakeholders' responsibilities over IT decisions domains. However, to our knowledge, the place of external stakeholders in IT governance has not been considered in past research. In this study, external stakeholders are understood as social groups in the environment that have interests with the organization and can influence the way enterprises invest and use information technologies (Hovelja, Vasilecas, & Rupnik, 2013). Based on IS research and management literature, a list of principal external stakeholders is selected. Using this list as a baseline, a qualitative research approach is undertaken to determine what external stakeholders are considered important in the context of IT governance and examine how they are prioritized in the governance of IT decisions domains.

This work seeks to contribute to the development of a stakeholder orientation in IT governance research. The study is based on the theory of stakeholder identification and salience (Mitchell, Agle, & Wood, 1997). According to this theory, power, legitimacy and urgency are the three attributes that qualify a stakeholder and determine its salience (the degree to which claims of competing stakeholders are given priority). The level of stakeholder's salience constitutes an indicator of its importance compared to other stakeholders (Jawahar & McLaughlin, 2001).

This paper is structured as follows: first, a literature review is made on stakeholder theory including a description of the salience model of Mitchell et al. (1997). Then, a review of the use of stakeholder concept in IT governance research is made. The next section presents the research question and propositions. Thereafter, the paper presents the research methodology and empirical data from a qualitative survey. Based on the result analysis, the authors illustrate the lessons learned, point out the implications to theory and practice along with a notification of limits of the present study to be addressed in future research.

2   THEORETICAL FOUNDATIONS

2.1 Stakeholder Theory

The concept of stakeholder represent "*any group or individual who can affect or is affected by the achievement of the organization's objectives*" (Freeman, 1984). The contribution of stakeholder theory to management research was made from three separate perspectives but supporting each other, namely: descriptive, instrumental and normative perspectives (Donaldson & Preston, 1995). In the *normative perspective* also called the ethical one, the social performance of organizations is central (Carroll & Nasi, 1997; Clarkson, 1995; Wood & Jones, 1995). In this perspective, there was a strong link between corporate governance and corporate social responsibility. According to this perspective, organizations, need to recognize the interest of all stakeholders and address them through appropriate strategies (Christopher, 2010). The *instrumental* perspective focuses on the sound management of stakeholders on the basis of their analysis through tools and techniques for strategic decision support (Mason & Mitroff, 1981; Mitroff & Linstone, 1993). In this context, research aims to assess the effectiveness of these methods of stakeholders' analysis in order to improve corporate performance goals (Agle, Mitchell, & Sonnenfeld, 1999; Berman, Wicks, Kotha, & Jones, 1999; Jones, 1995). The *descriptive* perspective reports meanwhile relations between the organization and its environment. From this perspective, the organization is perceived as a constellation of cooperative and competitive interests having intrinsic value (Donaldson & Preston, 1995). This perspective is based on theoretical models such as the model of Mitchell et al. (1997) to analyze the relationship of the organization with its stakeholders in order to manage them better. A central issue in stakeholders' management is their identification and prioritization (Carroll & Buchholtz, 1996; Clarkson, 1995; Donaldson & Preston, 1995; Freeman, 1984).

2.2 Stakeholder identification and salience: The Mitchell model

Stakeholder management implies to know "*who (or what) are the stakeholders of the firms? And to whom (or what) do managers pay attention*" (Mitchell et al. 1997). To answer this question, Mitchell et al. (1997) developed a descriptive theory of stakeholders widely cited in the literature, and which is today a reference in stakeholders management research (Caby & Harvey, 2001; Neville, Bell & Whitwell, 2011 ; Parent & Deephouse, 2007). To assess the importance of stakeholders, the authors propose a theoretical model based on the concept of salience. *Saliency* is defined as: "*the degree to which managers give priority to competing stakeholder claims*" (Mitchell et al., 1997). Stakeholder *salience* depends on three attributes: power, legitimacy and urgency. Power is "*the (potential) ability of stakeholders to impose their will on a given relationship through coercive, utilitarian, or normative means*" (Etzioni, 1964). A legitimate stakeholder is "*one whose actions and claims are seen as appropriate, proper and desirable within some socially constructed system of norms, values, beliefs*" (Suchman, 1995). Urgency is "*the degree to which stakeholder claims call for immediate attention*" (Mitchell et al. 1997). These three attributes depend on the perception of the manager inside the firm (Mitchell et al. 1997). A typology of stakeholders was developed based on this theory. This typology states that the more attributes a stakeholder had, the greater its salience would be (Parent & Deephouse, 2007). Based on Mitchell et al.'s model, stakeholders with no power, legitimacy, or urgency are perceived as having no salience with the firm's managers. In other situations, stakeholders may be considered as salient depending on whether they possess power, legitimacy, and urgency, two of these attributes or one of them. Thus, power, legitimacy and urgency are the three attributes that qualify a stakeholder and determine its salience according to this theory. Thereafter, the strategy a company uses to deal with a stakeholder is determined by the importance of that stakeholder compared to other stakeholders (Jawahar & McLaughlin, 2001). Although this conceptualization of *salience* is generally well accepted, Neville et al. (2011) underline that these attributes are not dichotomous but rather continuous variables. Most empirical research used the Mitchell et al. (1997) framework as a tool for describing stakeholders' salience by using either qualitative or quantitative research methods (Parent & Deephouse, 2007). For instance, archival material (Driscoll & Starik, 2004; Friedman & Mason, 2004; Jeurissen, 2004; Ryan & Schneider, 2003) interviews (Harvey & Schaefer, 2001; Howard, Vidgen, & Powell, 2003 ; IJzerman, Reuzel, & Severens, 2003; Winn & Keller, 2001) and quantitative surveys (Agle, Mitchell & Sonnenfeld, 1999; Buanes, Jentoft, Runar Karlsen, Guerci & Shani, 2013; Maurstad, & Soreng, 2004) were used in past research to examine stakeholders' salience and relationships management in different organizational context.

2.3 Use of stakeholder concept in IT Governance

IT governance is recognised as an integral part of enterprise governance. It occurs via the distribution of IT decision-making rights and responsibilities among different stakeholders in the enterprise, and the definition of the procedures and mechanisms for making and monitoring strategic IT decisions (Peterson, 2004).

As stated by Peterson (2004) there is a clear distinction between IT management and IT governance. Using their words: "IT management is focused on the effective and efficient internal supply of IT services and products and the management of present IT operations. IT governance in turn is much broader, and concentrates on performing and transforming IT to meet the present and future demands of the business (internal focus) and business customers (external focus)". As such, IT governance may involve different stakeholders from inside and outside the organisation.

In describing how IT governance is deployed in organizations, past research focused in identifying key IT decision domains, and determining their governance modes, by specifying the decisions rights and responsibilities of organizational stakeholders over IT activities (e.g. Brown & Magill, 1994; Brown, 1997; Ein - Dor and Segev, 1982; Olson and Chervany, 1980; Sambamurthy & Zmud, 1999; Weill & Ross, 2004). Thus, several classifications of IT decisions domains were presented in the literature and with it the distribution of decision-making between key stakeholders (Ahituv, Neumann, & Zviran,

h1989; Brown & Magill, 1994; Ein-Dor & Segev, 1982; Olson & Chervany, 1980; Sambamurthy & Zmud, 1999; Tavakolian, 1989). This shows the evolution of the IT function and its governance through the years. Table 1 presents a summary of key research in this area.

Authors	ITG related activity/decision	Stakeholders identified
Sambamurthy and Zmud (1999); Brown (1999)	- IT infrastructure management - IT use management - IT project management Governance modes:Centralized, Decentralized, Federal	• Corporate IS management Unit, Divisional IS, Line management.
(Weill & Ross, 2004); (Weill & Ross, 2005)	- IT principles (strategic vision) - IT architecture - IT infrastructure strategies - Business application needs - IT investment Governance modes: - Business monarchy, IT monarchy, Feudal, Federal, Duopoly, Anarchy	• Top-managers, IT specialists, Business Units, Combination of Corporate center and Business units, IT group and Business group, Isolated individual or small group decision making.
Grover, Henry, and Thatcher (2007)	- IT strategic vision - IT architecture - IT investment - IT infrastructure - Application development - IT outsourcing Governance modes: - Federal (Hybrid with different configurations)	• Top management, IT management, Business units managers, IT managers, IT vendors units
IT-Governance-Institute (2003; 2005 ; 2011)	- Present a holistic view of IT Governance	• Board of directors, External Auditors, Internal Auditors, Senior management team (IT governance council), IOC, Account executives (customer service representatives, business analysts), Project office, Project managers, User program managers, User area prioritization Teams (collaborate with IT vendors)
Peterson (2004)	- Present a holistic view of IT Governance	• Corporate executives, IT executives (CIO, etc.), Business executives, IT management, (divisional) business executives, IT consultants, IT vendors (external IT managers) (divisional), IT relationship managers

Table 1.   Principle Stakeholders roles and responsibilities in IT governance past research

As we see research on IT governance has mainly an in internal focus to the organization as illustrated through the different archetypal forms of IT governance mentioned in the literature and broadly on how IT governance is deployed. This being said, there are other studies that have addressed the governance of

interorganizational relationships involving IT such as IT outsourcing relationships (Aubert, Rivard, & Patry, 2004; Beulen, Ribbers, & Roos, 2010) or other forms of inter-organizational governance of IT (Croteau, Bergeron, & Dubsky, 2013; Markus & Bui, 2012). In our opinion, these researches cover the governance of transactions that any organization can have with its business partners. At the base, IT governance remains an integral part of enterprise or corporate governance. It falls under the responsibility of board members and executive management, and governance-related roles and activities need to be carried out by executives, managers and staff in almost every function and business unit across the enterprise (IT-Governance-Institute, 2008, p.13). As such, the decision to outsource partially or totally a given IT activity of the organization, for example, remains a corporate IT governance decision and thereby how to deal with IT outsourcing decisions would be arm-length IT governance, that is, governance of transactions. However, the organization does not evolve in a vacuum but is influenced by its environment so it's important to examine the potential impact of environmental forces, namely external stakeholders on IT governance. Indeed, the *IT Governance Institute* notes that, to be effective, IT governance has to consider external stakeholders' claims in a comprehensive IT governance framework (IT-Governance-Institute, 2011). To our knowledge, no research has empirically determined the importance given to external stakeholders in IT governance and examine how they are prioritized in this context.

3 RESEARCH QUESTION

In this study, the theory of stakeholder identification and salience (Mitchell, Agle, & Wood, 1997) is used as a theoretical lenses and adapted to IT governance domain in order to respond to the following research question:

- *What external stakeholder groups are perceived as most important in IT governance context? how are they prioritized in this context?*

External stakeholders are understood as social groups in the environment that have interests with the organization and can influence the way enterprises invest and use information technologies (Hovelja et al., 2013). A list of principal external stakeholders were identified from IS research (Grover, Henry et al. 2007; IT-Governance-institute, 2003; 2005; 2011; Peterson, 2004; Rau, 2004; Weill & Ross, 2005) and management literature (Agle et al. 1999; Argandoña 1998; Berman, Wicks et al. 1999; Donaldson & Preston 1995). This list constitutes a baseline in the investigation of the research question. It reports the following parties: IT suppliers, IT consultants, compliance, external audit & security groups, business customers, business suppliers, investors, shareholders, competitors, trade associations and local communities.

As mentioned earlier, according to theory, power, legitimacy and urgency are the three attributes that qualify a stakeholder and determine its salience and thus informs on its importance as perceived by managers (e.i. IT executives). In this study, stakeholder attributes qualifications are adapted from Agle, Mitchell, and Sonnenfeld (1999) definitions. Thus, an external stakeholder is said to have *power* whether or not it is used, if it has the ability to apply a high level of direct economic reward or punishment (money, goods, services, etc.) and/or coercive force (lock, sabotage, etc.) and/ or positive or negative social influence (reputation, prestige, etc.) to obtain its will. An external stakeholder is characterized by *urgency* if its expectations (claims, demands or desires) are felt to be important and require immediate attention from the organization IT. Finally, an external stakeholder is said to be *legitimate* if there is a generalized perception by the organization IT that its claims are proper and appropriate.

4   Research propositions

4.1   External stakeholder identification in IT governance context

The majority of IS research refers to individuals or groups internal to the organisation when dealing with stakeholders in IS (Pouloudi, 1999). This is also the case in most of the IT governance research (see section 2.3 for more details). But information systems are now used inside and outside organizations and often require taking into account various stakeholders with sometimes conflicting needs and interests (Schlichter & Rose, 2013). This is the case for example of inter-organizational information systems, these systems operate in complex environments where people, groups and organizations have interests and needs that may affect or be affected by the inter-organizational systems put in place (Bahakiqaruto & Montagna, 2008). Intra-organizational systems are also influenced by external parties especially during their development or implementation. The case of ERP systems is a good example. The implementation of this type of extended systems can affect the interests of different stakeholders inside and outside the organization (Fowler & Gilfillan, 2003; Markus, Ahmed, Petrie, & Tanis, 2000). These same stakeholders can influence the design and implementation of such systems to satisfy their own interests (Boonstra, 2006). Some systems must also comply with rules and specific legislative standards related to third parties such as governmental entities, industries and so on (Bahakiqaruto & Montagna, 2008). On the basis of these arguments, the following propositions are formulated:

> *Proposition 1a: Organizational external stakeholders who can affect the organization's IT should be considered among the stakeholders of IT governance.*

> *Proposition 1b: Organizational external stakeholders who can be affected by the organization's IT should be considered among the stakeholders of IT governance.*

4.2   External stakeholder prioritization in IT governance context

The level of stakeholder salience informs on its importance in a given context as it is perceived by the manager (Agle et al., 1999). As indicated by Mitchell et al. (1997), stakeholder's salience depends on the stakeholder's power to influence the organization, the legitimacy of the stakeholder's relationship with the organization and the urgency of the stakeholder's claim on the organization. These stakeholder's attributes are not objective but rather socially constructed reality (Mitchell et al., 1997). Although the organization is supposed to meet the interests of all stakeholders, it is usually based on its dependence on this part (as a provider of resources) that the organization will grant him one priority compared to others (Jawahar & McLaughlin, 2001). As depicted in the literature revue, IT governance falls under the responsibility of internal stakeholders to the organization and focus on specifying their decisional rights and responsibilities over IT decision domains (Weill & Ross, 2005). Even if they do not hold a decision role within the IT governance framework, external stakeholders still remain part of this framework and can affect or be affected by IT governance decisions. Their influence can be noticed through the power that may exercise on the different IT governance decision areas (i.e. IT decision domains); the legitimacy of their relationship with the organization's IT and the urgency of their claims as perceived by IT executives. For instance, this seems to be the case in IT strategic planning decision domain where influences of environmental stakeholders are considered in the formulation of the IT strategic plan (Hovelja et al., 2013). Since each IT decision domain has its specific characteristics, one's can think that the influence of external stakeholders on IT governance may also vary according to IT decision domains which are the IT governance decision areas (Grover, Henry, & Thatcher, 2007; Sambamurthy & Zmud, 1999; Weill & Ross, 2005; Weill & Ross, 2004). Based on these arguments, we issue the following propositions:

> *Proposition 2a: External stakeholders' degree of power, legitimacy and urgency is associated with their importance in IT governance context as perceived by IT executives.*

Proposition 2b: External stakeholders' importance in IT governance as perceived by IT executives will vary according to IT decision domain.

5 METHODOLOGY

5.1 Research approach: qualitative survey

This study follows a qualitative research approach, namely a qualitative survey. According to Fink (2003), qualitative surveys gather information about the meaning that people give to their experiences and the ways in which they express themselves. In this research, the importance given to external stakeholders in IT governance is essentially captured through stakeholder's salience (the degree to which claims of competing stakeholders are given priority) as perceived by IT executives. As such, we relied on IT executives perceptions to understand how external stakeholders are prioritized in IT governance context.

More specifically, this research is conducted in two stages as follows:

- **Stage 1: external stakeholders' identification in IT governance context** – this stage consists of the validation of the external stakeholders list identified from the literature with respondents. This list reports the following parties: IT suppliers, IT consultants, compliance, external audit & security groups, business customers, business suppliers, investors, shareholders, competitors, trade associations, local communities. We have also added a category 'others' to allow interviewed IT executives to propose other external stakeholders that they consider important in an IT governance context and that we have not specified in our list. This step allowed us to come up with a comprehensive list of external stakeholders that are considered in IT governance context.
- **Stage 2: external stakeholders' prioritization in IT governance context** – assessment was conducted based on the theoretical integration of the Mitchell's et al. (1997) model of stakeholders' identification and salience with the IT decision domains classification provided by Grover et al. (2007). This theoretical integration allow us to determine the importance given to external stakeholders in IT governance based on their prioritization according to the major IT decision domains experienced by organizations as part of a holistic IT governance framework. During interviews, respondents were asked to assess the level of power, legitimacy and urgency on a scale of 1 to 10 (1 being low and 10 being high) of each external stakeholder group and that for each IT decision domain. In addition to these values, respondents were asked to comment on their respective value choices (low, medium or high). They were also asked to elaborate on how external stakeholders may influence IT governance according to each decision domain.

5.2 Data collection

Data collection was performed through IT executives' interviews. IT executives (CIO, VP IT and other senior IT managers) are identified as key informants in this study given their direct involvement in IT governance of the organization. In fact, IT governance is situated at multiple levels in the organisation including the senior/executive management level (Van Grembergen, De Haes, & Guldentops, 2004) where business as well as IT are involved in the IT governance process (S. De Haes & Van Grembergen, 2009). IT executives as part of senior management are generally held responsible for IT decision making in the organization (De Haes & Grembergen, 2008; Peterson 2004; Weill & Ross, 2005) and have usually active participation in several IT governance organizational structures (e.g. different levels of steering committees) (Steven De Haes & Van Grembergen, 2008; IT-Governance-Institute, 2003). Therefore, they are able to talk and bring valuable information about the research questions under study.

The interviewees were selected according to a "purposive sampling" strategy (Patton, 2002). Interviewed IT executives are representing a wide range of experience, both in the number of years of experience of

general management of IT, in terms of background, geographic origin (Quebec, Ontario, and Alberta) and business sectors (companies having activity of production or services, banks, insurance, governmental organizations, consultant firms). This series of interviews with IT executives was made to obtain the widest variety in responses. The Canadian edition of the directory of *top Computer executives* for 2013 was our sampling frame. Sixty-five IT executives have been identified and contacted by e-mail. Thirteen people have accepted to participate in our study. An interview was not completed due to professional commitments of the interviewed. Therefore, the final sample consisted of twelve people. Descriptive statistics on the respondents and their respective organizations are presented in appendix A. Eleven of the twelve interviews were conducted by phone, because of the geographical location of the respondents or to offer more flexibility to them given their busy agenda. Interviewees provided their informed consent prior to interviews. Interviews were lasted approximately between 45 minutes and one hour and a half. All the interviews were recorded and later transcribed.

5.3   Data analysis

We followed the procedure of content analysis of Fink (2003) as well as additional complementary data representation and coding methods (Miles & Huberman, 1994; Langley, 1999; Patton, 2002) to perform our data analysis according to a qualitative approach.

The interviews were transcribed and codified using a developed coding grid which is based on Mitchell et al. (1997) model and the IT decision domains classification of Grover et al. (2007). The content analysis of the interviews was made to examine how external stakeholders are prioritized by IT executives in IT governance across six major IT decision domains (i.e. IT strategic vision, IT architecture, IT investment, IT infrastructure, IT applications development, IT outsourcing). The codification procedure of the interviews data was based on a combination of deductive and inductive analysis approach. As a first step, we comb through the transcripts and note every instance of support for the preselected themes initially designed in the coding grid. This deductive approach allowed as categorizing data using the list of codes initially developed based on the definitions associated with the sixth IT decision domains of Grover et al classification (2007) and the three stakeholders' attributes of the Mitchell et al. model (1997). Then, we went through an inductive approach, by looking for dominant themes that we didn't consider at first place in our coding grid. Thus, *external stakeholder influence type* has emerged as new theme from the analysis process and has been added to the coding grid after validation with the authors of this article.

All the interviews were coded according to the same procedure. We have initially selected two interviews randomly and coded them according to the coding grid. The result of the codification was subsequently discussed with the authors of this article to verify the contents of the grid and its interpretation. This verification led to minor adjustments made to the labeling of the definitions of our grid. Subsequently, all previously transcribed interviews were coded based on the revised coding grid.

In addition to content analysis interviews, values provided by respondents to the three salience attributes (power, legitimacy and urgency) have enabled us to calculate the level of *salience* of each stakeholder as perceived by IT executives. Following past research (Guerci & Shani, 2013; Magness 2008), we formulated an indicator of salience that sums up how stakeholders are considered powerful, legitimate and urgent. The salience score was computed for each external stakeholder group, by averaging together the power, legitimacy and urgency ascribed to each stakeholder by all respondents for each IT decision domain. The salience indicator in addition to the content analysis built upon the data interviews allowed us to deepen our understanding about external stakeholder prioritization in IT governance.

6   RESULTS AND DISCUSSION

6.1   External stakeholder identification in IT governance context

Our objective at this stage of the research is to identify external stakeholders, which are taken into account by IT executives in IT governance decision-making.

The validated list of external stakeholders that are considered in IT governance context is presented in *table 2* as follows:

External Stakeholders groups	Rationale	Impact on organization's IT	Stake in IT	Respondents
IT Vendors	This group includes both TI consultants, computer equipment vendors, and the consulting firms in TI and other organizations for the promotion of best practices in TI.	*Affect*	Influence of business lines to adopt their solutions, technologies and best practices.	all
Compliance, External Audit & Security Group	This group includes external auditors, governmental and industry regulatory bodies as well as of the teams ensuring compliance in terms of security.	*Affect*	Respect their recommendations.	all
Business Customers	Is all business customers who are in the organizational boundary.	*Affect and affected by*	Reliability and availability of the systems at their disposal.	all
Business Suppliers	This category includes suppliers of business of the organization.	*Affected by*	Implementation does not place systems that allow a better communication with them.	all
Investors & Shareholders	Brings together providers of funds of the organization.	*Affect*	Performance, compliance with the IT budget, cost reduction and optimization of processes.	all
Competitors	The different competitors of the Organization	*Affect*	Monitor our IT products. Provide best services and IT products.	all
Trade Associations	Brings together trade unions and professional bodies.	*Affected by*	Offer IT products and services that respond to their requests.	all
Local Communities	The public (including media), the city and the country in which operates the organization.	*Affected by*	Recognition of their cultural particularity, their needs.	all
Joint Ventures	A business arrangement in which two or more	*Affect and affected by*	Access to technological tools which allow the	ITE2, ITE5

	parties agree to pool their resources for the purpose of accomplishing a specific task. The venture is its own entity, separate and apart from the participants' other business interests.		development of products or services in common.	

Table 2. *List of external stakeholders considered in IT governance*

Respondents suggested the grouping of categories «investors» and «shareholders» together because of their common vocation of purveyors of funds for the organization. They also suggested that we combine IT consultants and suppliers of hardware equipment including networking providers under the same group that we have named "IT vendors". In addition, the majority of respondents (ITE2, ITE4, ITE5, ITE7, TE8, ITE9, ITE10, TE12) considered that the group "trade associations" should refer only to the trade unions and professional orders. According to our respondents, associations and other agencies promoting IT best practices such as market analysts should be categorized with "IT vendors". In addition, two respondents (TE2, TE5) suggested an additional group that was not present in the preliminary list, namely *joint ventures*. After validation of this new group with the other respondents, we decided to add it in the validated list of external stakeholders that can be considered within an IT governance context.

In addition, all IT executives interviewed said that some of the stakeholders presented in table 3 affect organizations' IT. This is the case for example of compliance, audit & security groups or investors & shareholders. Other stakeholders are instead affected by the organization's IT such as business suppliers. Some others stakeholders affect and are affected by the organization's IT through their requirements like business customers. In addition, according to our respondents the different stakeholders identified had stakes in IT and therefore they could influence IT governance.

The validation process of the external stakeholders list with respondent allowed us to respond to propositions **1a** and **1b** of this study.

6.2 External stakeholder prioritization and influence in IT governance context

Our goal at this stage of the research was to examine how external stakeholders are prioritized given their level of salience as perceived by IT executives. The level of salience attributed to each external stakeholder group informs on its importance compared to other stakeholders groups.

Analysis of the data (computed salience' scores and content analysis of the interviews) revealed that the prioritization of external stakeholders in IT governance varies according to IT decision domains. In fact, the computed salience scores based on salience attributes values provided by respondents are ranged from high (> 7, on a 1-10 scale) to low (< 4, on a 1-10 scale) level depending on IT decision domain. In addition, the content analysis of the additional information and comments provided by respondents on stakeholder salience attributes brought additional insights on how external stakeholders' are prioritized according to IT decision domains. Furthermore, the content analysis of our interviews reveals that external stakeholders may directly or indirectly influence the governance of IT decision domains depending on their active role in the organization's IT or their relationship with the organization as a whole. Table 3 presents a summary of these findings. Below is a detailed description of the prioritization of each external stakeholder group as perceived by respondents.

	IT strategic vision			IT architecture			IT investments			IT infrastructure			Application development			IT outsourcing		
Influence	Direct			Indirect			Direct			Indirect			Indirect			Direct		
Importance*	High			Moderate			High			Moderate			Moderate			High		
Investors & shareholders	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U
	High	High	High	Mod	High	Low	High	High	Mod	Low	High	Mod	Mod	High	Mod	High	High	High
Influence	Indirect			Indirect			Indirect			Indirect			Indirect			Indirect		
Importance	High			High			Moderate			High			High			High		
Compliance External Audit & Security Group	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U
	High	High	High	High	High	Mod	Mod	High	Low	High	High	High	High	High	Low	High	High	High
Influence	Indirect			Direct			Indirect			Direct			Direct			Direct		
Importance	Moderate			High			High			High			Moderate			Moderate		
IT vendors	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U
	High	High	Low	High	High	Mod	Mod	High	Mod	High	High	High	Mod	High	Low	Mod	High	Low
Influence	Indirect			Indirect			Indirect			Indirect			Indirect			Indirect		
Importance	High			High			High			High			High			Moderate		
Business customers	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U
	High	High	High	High	High	Mod	High	High	Mod	Mod	High	High	High	High	High	Mod	Mod	Low
Influence	Indirect			Indirect			Indirect			Indirect			Indirect			Indirect		
Importance	High			Moderate			Moderate			Moderate			Low			Low		
Competitors	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U
	High	High	High	Low	High	Mod	Mod	High	Low	Low	Mod	Mod	Low	Mod	Low	Low	Mod	X
Influence	Indirect			Indirect			Indirect			Indirect			Indirect			Indirect		

	IT strategic vision			IT architecture			IT investments			IT infrastructure			Application development			IT outsourcing		
Importance	Low			Low			Low			Low			Low			Low		
Business suppliers	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U
	Low	High	Low	Low	Mod	Low	Low	High	Low	Low	High	Low	Low	Mod	X	Low	Mod	Low
Influence	Indirect			Indirect			Indircet			Indirect			Indirect			Indirect		
Importance	Low			Low			Moderate			Low			Low			Low		
Trade Associations	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U
	Low	High	Low	Low	Low	Low	Mod	Mod	Low	Low	Low	Low	Low	Low	Low	Low	Mod	Low
Influence	Indirect			Indirect			Indirect			Indirect			Indirect			Indirect		
Importance	Low			Low			Low			Low			Low			Low		
Local communities	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U
	Low	Mod	Low	Low	Low	Low	Low	Mod	Low	Low	Mod	Low	Low	Mod	Low	X	Low	X
Influence	Indirecte			Indirecte			Indirecte			Indirecte			Directe			Directe		
Importance	Low			Low			Low			Low			Moderate			Moderate		
Joint ventures	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U	P	L	U
	Low	Mod	Low	Low	Mod	Low	Low	Mod	Low	Low	High	Low	Mod	Mod	Low	Mod	Mod	X

Table 3.   Prioritization of external stakeholders in IT governance as perceived by IT executives

P : level of stakeholder power as perceived by respondents
L : Level of stakeholder legitimacy as perceived by respondents
U : Level of urgency of stakeholder claims as perceived by respondents
X : Respondents consider that the stakeholder don't possess this attribute
Importance: refers to salience score and is determined from stakeholder salience attributes (Power, Legitimacy, Urgency)

   Investors & shareholders group. Respondents gave a high importance to the group of investors & shareholders in IT strategic vision decisions (ITE1, ITE2, ITE3, ITE4, ITE5, ITE6, ITE7, ITE9, ITE11 and ITE12), IT investments planning (ITE2, ITE3, ITE4, ITE5, ITE6, ITE7, ITE8, ITE9, ITE10, ITE11, ITE12) and IT outsourcing (ITE4, ITE5 ITE6, ITE7, ITE8, ITE9, ITE10, ITE11, ITE12). Respondents consider that this group has a direct influence on the governance of these IT decision domains because of their funding role in IT. As such, this group has a great influence on IT budget allocation according to respondents. Investors & shareholders group seemed to hold a utilitarian power following the description of Mitchell et al. (1997). For instance, ITE4 commented "*they are who pay then the costs become an extremely important issue for them. We must be able to explain the "why" of the budgetary envelopes and the financial efforts that we are asking from them. They will follow us very strictly on the adherence to schedules and the respect of deadlines*". The involvement of investors & shareholders in the governance of these IT decision domains is perceived as highly legitimate. Their claims are treated with urgency given the monetary impact that may have on such decisions domains.

Investors & shareholders are however seen as moderately important in IT architecture decisions (ITE1, ITE3, ITE4, ITE5, ITE6, ITE7, ITE8, ITE11, ITE12), IT infrastructure decisions (ITE3, ITE4, ITE8, ITE10, ITE11, ITE12) and applications development decisions (ITE1, ITE3, ITE4, ITE5, ITE6, ITE8, ITE9, ITE10, ITE11, ITE12). The respondents consider that the influence of investors & shareholders is indirect at that level. For instance, ITE1 says "*indirectly yes [...]so if they tell us to be 'customer centric' and offer new business lines of consultation we have to implement technological solutions which correspond to these strategic needs and to adapt our architecture accordingly*". The respondents think that it is very legitimate to prove to investors and shareholders that injected money in IT are well used and this is translated concretely by technological facilities and equipment that meet the business needs. Their claims in this regard are seen as moderately urgent to respond to.

   The compliance, external audit & Security group. The respondents ascribe a high level of importance to compliance, external audit & security group in IT strategic vision decisions (ITE1, ITE3, ITE4, ITE5, ITE8, ITE9, ITE11 and ITE12), IT architecture decisions (ITE1, ITE2, ITE3, ITE4, ITE5, ITE6, ITE8, ITE9, ITE10, ITE12), IT infrastructure decisions (ITE1, ITE3, ITE4, ITE5, ITE6, ITE8, ITE9, ITE10, ITE11, ITE12), applications development decisions (ITE1, ITE2, ITE3, ITE4, ITE5, ITE6, ITE7, ITE9, ITE10, ITE11, ITE12) and IT outsourcing decisions (ITE4, ITE5, ITE6, ITE7, ITE8, ITE9, ITE10, ITE11, ITE12). This group has an indirect influence on these different IT decision domains. Indeed, as part of its institutional power (Freeman, 1984), this group dictates the legislative frameworks to which organizations must generally comply such as information security norms and compliance with industry or legal laws. The recommendations of these regulatory bodies will be translated in terms of business rules for information systems of the organization (Li et al., 2012). For instance, ITE4 mentions "*They are very important, yes. There are a lot of decisions or on how we'll orchestrate all of the IT delivery that is greatly influenced by the constraints or the expectations of these regulatory frameworks. If these regulatory frameworks were not there the TI delivery will be very different*". The relationship with this group is perceived as highly legitimate. Claims in this regard are treated with moderate to high urgency according to respondents.

Meanwhile, the compliance, external audit & security group holds a medium importance in IT investment decisions (ITE2, ITE3, ITE4, ITE5, ITE6, ITE7, ITE8, ITE9, ITE10, ITE11, ITE12). Respondents consider that they also have an indirect influence on this IT decision domain. ITE8 says "*of course, with laws and regulations when it is said for example that we should be accessible web, it causes projects so we'll cause investments. They are investments that result in salaries, in consultation for example. This may delay some projects or prioritize other projects. Yes, it has an impact*". However, respondents seem to consider the claims in this regard with little urgency.

   IT vendors. The majority of respondents ascribe a high level of importance to the IT vendors group in IT architecture decisions (ITE1, ITE2, ITE3, ITE4, ITE5, ITE6, ITE8, ITE9, ITE10, ITE12), IT investment (ITE2, ITE3, ITE4, ITE5, ITE6, ITE7, ITE8, ITE9, ITE10, ITE11, ITE12) and IT

infrastructure decisions (ITE1, ITE3, ITE4, ITE5, ITE6, ITE8, ITE9, ITE10, ITE11, ITE12). Most of the respondents think that technological feasibility of the IT architecture and the IT infrastructure is often limited by what the IT vendors offer as technological products or IT services on the market. Thus, we can say that this group has a utilitarian power as described by Mitchell et al. (1997). ITE6 commented "*altogether, with the limitations of possible solutions in the market or what they see as evolution in the market of their own technologies[...] so when we plan IT architectures if one has the best strategy but no provider that offers something to be able to meet the needs this will influence our strategies*". As such, the involvement of IT vendors in such decisions is seen as highly legitimate. The claims of this group are therefore treated on a priority basis in this context.

Respondents believe however that IT vendors moderately affect decisions on IT strategic vision (ITE2, ITE3, ITE4, ITE5 ITE6, ITE7, ITE10, ITE11, ITE12) and those dealing with applications development (ITE1, ITE3, ITE4, ITE5, ITE6, ITE8, ITE9, ITE10, ITE11, ITE12). For instance, the influence of IT vendors on IT strategic vision decisions is "much *more indirect. IT vendors influence top management by the sales aspect and marketing tools etc and the IT level have often to catch up*" (ITE5). This is the case for example of consulting firms that do benchmarking analysis. They can indirectly influence the IT orientation and vision of the organization throughout the market research they produce on the trends they promote in terms of best practices. Respondents don't see any urgency in responding to their claims at this level.

Nevertheless, IT vendors directly influence applications development decisions given their involvement in systems development projects on a contractual basis as an outsourcer or through the consulting services they provide as consultants. As such, they are seen to be highly legitimate in this context. Their recommendations rather than claims are perceived not to be urgent.

  Business customers. Most respondents associate a high level of importance to business customers in the governance of almost all IT decision domains, namely: IT strategic vision (ITE1, ITE3, ITE4, ITE5, ITE8, ITE9, ITE11 and ITE12), IT architecture (ITE1, ITE2, ITE3, ITE4, ITE5, ITE6, ITE8, ITE9, ITE10, ITE12), IT investment (ITE2, ITE3, ITE4, ITE5, ITE6, ITE7, ITE8, ITE9, ITE10, ITE11, ITE12), IT infrastructure (ITE1, ITE3, ITE4, ITE5, ITE6, ITE8, ITE9, ITE0, ITE11, ITE12) and applications development (ITE1, ITE2, ITE3, ITE4, ITE5, ITE6, ITE7, ITE9, ITE10, ITE11, ITE12). The influence of business customers on these IT decision domains is rather indirect. It is indeed through line management that customers' needs are communicated to the IT function. Respondents believe that although their influence is indirect, their power is high in this context. According to the description of Mitchell et al. (1997), business customers have normative power taking into account their influence on the image of the organization as a whole but also utilitarian as they are the main source of revenue for the organization. Respondents also associate business customers with a high level of legitimacy and urgency in the processing of their claims. For instance, ITE10 said about business customers "*they do not endorse the decisions but they motivate decisions. We exchange with them. They still have power on the reputation, prestige and money. Not meeting their needs is constraining our source of revenue*".

Customers are however considered as being moderately important in IT outsourcing decisions. Their influence at this level is rather. Indeed, the organization wanting to please its customers could decide to choose IT outsourcers in a way that benefit its brand image and reputation with its business customers. ITE5 says "*Yes, it can have an impact on the image. External client could badly react if we decide to give the contract to a non-local firm. We consider the client reaction in our decisions. We could even have reciprocity with the client*". However, respondents don't consider their claims with urgency within this decision domain.

  Competitors. Most of the respondents (ITE1, ITE3, ITE4, ITE5, ITE8, ITE9, ITE11 and ITE12) associate a high level of importance to competitors in the governance of IT strategic vision decision. Taking into account the achievements of the competitor is required in the IT strategic plan, this is what our respondents revealed. ITE8 indicates for example that "*their influence is in the form of investments they make to get the market, so if we see penetrations in the market to offer new services [...]*

it influence our IT strategic vision. So there is a constant analysis of the competition in order to adjust our strategic plan".

In addition, respondents gave a moderate level of importance to competitors in IT architecture (ITE1, ITE3, ITE4, ITE5, ITE6, ITE7, ITE8, ITE11, ITE12), IT investment (ITE4, ITE5, ITE6, ITE7, ITE8, ITE11, ITE12) and IT infrastructure (ITE3, ITE4, ITE5, ITE6, ITE7, ITE8, ITE11) decision-making. Respondents believe that their influence in these domains is indirect. They explain that a constant analysis of the competition in terms of technology trends and innovation (Benchmark), will indirectly influence the governance of these IT decisions especially in technological choices to retain in IT architecture and IT infrastructure settings. For instance, ITE1 mentions "*if we discover that a competitor has taken the lead on us so we'll want to catch up or overtake this advance, and the changes that we do will also impact the IT architecture*". Their influence can also cause adjustments on IT investments level considering the analysis of competition and their technological innovations. ITE5 said "there *is a constant analysis of the competition in order to adjust our IT investments plans*". This analysis of the competition is perceived as very legitimate and requires special attention on the part of IT executives.

Furthermore, respondents give very little importance to competition in the governance of applications development decisions and those related to IT outsourcing. Respondents believe that it is legitimate to consider what the competition is doing in these domains (ITE2, ITE3, ITE10, ITE4, ITE12, ITE8, ITE9) for benchmark reasons but less urgent.

   Business suppliers. All respondents give very little importance to business suppliers in the governance of the different IT decision domains. ITE1 comments "*They are small players in relation to us. Service providers that's all*". However, they consider that it is legitimate to consider their demands in IT governance on a voluntary basis and it is in this way that they can influence them indirectly. For instance, ITE6 said about business suppliers "*there may be some cases where suppliers need to offer us a new product or an additional service, this have to be considered in our IT architecture plan*".

   Trade associations. All respondents give very little importance to trade associations in the governance of IT decisions domains in general. Respondents consider that this group has no power over IT governance decision-making but it remains legitimate to consider its requests on a voluntary basis. However, trade associations are perceived to have medium importance in the governance of IT investment decisions. Respondents stress out that unions can make pressure to abort an IT investment project if they think that it is against the benefit of its members. ITE12 explains "*If the board makes investments on technology, there are times where the union can object to it [...] say if they perceived it in a way that it goes against the rights or benefits of employees. You know in a strike situation they will try to manifest their disagreements like saying you shouldn't buy that type of technology*". Thus, it appears that this group holds a power that could be described as coercive on IT investment decisions in accordance with the description of Mitchell et al. (1997). Respondents consider this group moderately legitimate and their claims moderately urgent to process.

   Local communities. All respondents give little importance to local communities in IT governance decision-making in general. They consider that this group has no real power over decision-making but it remains legitimate to consider its interests or requests without urgency. In some cases, this group is perceived as a pool of potential business customers (ITE3, ITE10, ITE4, ITE12, ITE8) that the IT function will attempt to satisfy by filling existing needs or future ones as identified through market research communicated by business lines to IT executives. In other cases, the local community is seen as a pool of potential human resources for the IT function. ITE9 says "*the availability of human resources [...] skills that exist in a region will often influence what kind of infrastructure we're going to develop java for example [...] well it's not going to depend only on this but it's going to be influenced by labour basin*". Marginally, the local community could have normative power according to the Mitchell et al. (1997) description by feeding some debates on IT issues. For example, ITE10 indicates that the influence of the local community on IT governance may be "in *terms of reputation. The debate on open source versus proprietary software is a good example. It is an eternal debate. Public opinion or even journalists can*

have a direct impact on this issue". In general, respondents were more likely to recognize the legitimacy this group in IT governance but did not see in this group real power or urgency of their claims that may affect overall IT governance.

Joint ventures. In general, respondents give little importance to the group of joint ventures in the governance of IT strategic vision decisions, IT architecture decisions, IT investments decisions and IT infrastructure decisions. They admit that it is very legitimate to take into consideration their needs in these decision domains assuming that they can influence them indirectly but consider however that their power over such decisions remains low. On the other hand, the respondents consider that joint ventures group is moderately important in the governance of applications development decisions and decisions related to IT outsourcing. The influence of this group is direct in this context. Respondents argue that the development of common product or service usually generates discussion on the development procedures that both parties will use. Thus, the option of "making together" rather than "buy" promote such strategic alliances (Poulin et al., 1994). The business partner may also intervene in the choice of the TI outsourcer for the service or product they have in common. ITE5 precise "*there is an impact. There must be agreement on the service of outsourcing for the development that we have in common. This will influence the common solution that we will put in place*".

Apparently, external stakeholders groups were not evaluated similarly given the salience attributes values provided by respondents in addition to their comments on the issue. Thus, External stakeholders' degree of power, legitimacy and urgency is associated with their importance in IT governance context as perceived by IT executives (Proposition 2a). In addition, as indicated in the results of this research the importance given to an external stakeholder varies according to IT governance decision domains. This enables us to respond to proposition 2b of this research.

Finally, analysis of the data reveals that external stakeholders can directly or indirectly influence the governance of the different IT decision domains. This depends on their involvement in a given TI activity or on the relationship that they have with the organization as a whole. For example, respondents noted that investors & shareholders directly influence governance decisions on IT strategic vision. The parties which indirectly influence IT governance decisions will do so through a third party, notably through the business units that are in direct contact with them. This is the case for example of business customers or business suppliers and even joint ventures. On the basis of these new data, we issued the following proposition:

> *Proposition 3: According to their role,* some *external stakeholders have direct influence on the governance of IT decision domains while others have an indirect influence.*

7   Contributions, limits and avenues of future research

The contribution of this study to existing IT governance literature is recognized by its theoretical perspective. This study is to our knowledge the first to have empirically applied stakeholder theory and specifically the stakeholders' identification and salience model of Mitchell et al. (1997) to analyse external stakeholders' prioritization in IT governance context. Previous research on IT governance has essentially focused on the study of internal stakeholders to the organization through the definition of their roles and responsibilities in IT governance decision-making. The Mitchell et al. (1997) model combined with the IT decision domains classification of Grover et al. (2007) formed our analytical framework to examine external stakeholders' salience in IT governance which informs on their prioritization in this context. The study revealed that external stakeholders' prioritization in IT governance varies according to IT decision domains. In addition, research results pointed out that external stakeholders influence on IT governance can be direct or indirect depending on their involvement within the IT organization in particular or the organization as a whole.

On the practical level, the results of this research emphasize the importance of the management of external stakeholders in IT governance. This can help IT executives to proactively determine ways to reduce

negative impacts on and of the groups with less influence and power within the organization. A thorough stakeholder analysis can also identify potential conflicts or risks that could jeopardize IT governance, as well as opportunities and strategies for stakeholder management. Moreover, this study initiate the importance of taking account of the needs and interests of the various stakeholders both internal and external can lead to a more effective IT governance (IT-Governance-institute, 2011).

Like all research, this study has some limitations. Due to the small size of the sample, we cannot generalize the results of this study. Furthermore, with this study we have mainly considered the opinion of IT executives (e.i. CIOs and IT VPs). Consideration of business executives in the organization could eventually enrich our contribution by bringing additional perception on external stakeholders salience in IT governance. A broader qualitative study could verify this. Moreover, future research could examine the salience of all stakeholders in IT governance context by considering external as well as internal stakeholders' attributes in a global model. This could bring a comprehensive classification of relevant stakeholders in IT governance context and allow business directors to establish a fair balance of stakeholder's claims and interests inside and outside the organization.

Finally, given the exploratory nature of this study, new research may deepen the results of this study by adopting different empirical approaches such as the administration of a large scale survey to validate the results of this study. In addition, the study of contextual variables such as the type of industry, the reporting level of the decision-maker in the organization and even the size of the external stakeholder might bring additional valuable information on external stakeholders' management in IT governance context.

8   CONCLUSION

Research on IT governance has essentially focused on internal stakeholders to the organization through the definition of their roles and responsibilities over IT decision domains. Although external stakeholders have no decisional roles in IT governance, it appears that they can also impact the governance of IT decision domains. Thus, investors & shareholders, compliance, external audit & security group, IT vendors, business customers, suppliers, competitors, trade associations, local communities and joint ventures all have an influence on IT governance. However, the study revealed that external stakeholders' prioritization in IT governance varies according to IT decision domains. In addition, their influence can occur directly or indirectly depending on their role and their involvement in IT activities, or in the organization as a whole.

References

Agle, B. R., Mitchell, R. K., & Sonnenfeld, J. A. (1999).Who matters to CEOs? An investigation of stakeholder attributes and salience, corporate performance, and CEO values. Academy of Management Journal, *42*(5): 507-525.

Ahituv, N., Neumann, S., & Zviran, M. (1989). Factors Affecting the Policy for Distributing Computing Resources. MIS Quarterly, *13*(4): 389-401.

Ali, S., Green, P., Alastair, R. (2012). The Influence of Top Managements' Absorptive Capacity of IT Governance Knowledge on Business-IT Alignment: an Empirical Analysis**.** In proceedings of the Americas Conference on Information Systems (AMCIS), Washington.

Argandoña, A. (1998). The stakeholder theory and the common good. Journal of Business Ethics, *17*(9-10): 1093-1102.

Aubert, B. A., Rivard, S., & Patry, M. (2004). A transaction cost model of IT outsourcing. Information & Management, *41*(7): 921-932.

Bahakiqaruto, L. C., & Montagna, J. M. (2008). Method for stakeholder identification in interorganizational environments. Requirements engineering, *13*(4):281-297.

Berman, S. L., Wicks, A. C., Kotha, S., & Jones, T. M. (1999). Does stakeholder orientation matter? The relationship between stakeholder management models and firm financial performance. Academy of Management Journal, *42*(5): 488-506.

Beulen, E., Ribbers, P., & Roos, J. (2010). Managing IT outsourcing: Routledge.

Boonstra, A. (2006).Interpreting an ERP implementation project from a stakeholder perspective. International Journal of Project Management, *24*(1):38-52.

Boynton, A. C., & Zmud, R. W. (1987). Information Technology Planning in the 1990's: Directions for Practice and Research. MIS Quarterly, *11*(1): 58.

Brown, C. V. (1997). Examining the emergence of hybrid IS governance solutions: Evidence from a single box site. Information Systems Research, *8*(1): 69-95.

Brown, C. V. (1999). Horizontal mechanisms under differing IS organization contexts. MIS Quarterly, *23*(3): 421-454.

Brown, C. V., & Magill, S. L. (1994). Alignment of the IS functions with the enterprise: Toward a model of history. MIS Quarterly, *18*(4), 371-404.

Brown, C. V., & Magill, S. L. (1998). Reconceptualizing the Context-Design Issue for the Information Systems Function. Organization Science, *9*(2): 176-195.

Buanes, A., Jentoft, S., Runar Karlsen, G., Maurstad, A., & Soreng, S. (2004). In whose interest? An exploratory analysis of stakeholders in Norwegian coastal zone planning. Ocean & Coastal Management, *47*(5): 207-223.

Caby, J. & Harvey G. (2001). The management of the family business*,* Paris: Economisa.

Carroll, A. B., & Buchholtz, A. K. (1996).Business & society: Ethics and stakeholder management. Cincinnati, OH: South-Western College Publishing.

Carroll, A. B., & Nasi, J. (1997). Understanding stakeholder thinking: themes from a Finnish conference. Business Ethics: A European Review, *6*(1): 46-51.

Christopher, J. (2010). Corporate governance—A multi-theoretical approach to recognizing the wider influencing forces impacting on organizations. Critical Perspectives on Accounting, *21*(8): 683-695.

Clarkson, M. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. Academy of Management review, *20*(1): 92-117.

Croteau, A.-M., Bergeron, F., & Dubsky, J. (2013). Contractual and Consensual Profiles for an

Interorganizational Governance of Information Technology. International Business Research,

 6(9): 30-43.

De Haes, S., & Grembergen, W. (2008). An Exploratory Study into the Design of an IT Governance Minimum Baseline through Delphi Research. The Communications of the Association for Information Systems, *2008*(22): 443-458.

DiMaggio, P. & Powell, W.W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality. American Sociological Review, (48):147-160.

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: concepts, evidence, and implications. Academy of Management Review, *20*(1): 65-91.

Driscoll, C., & Starik, M. (2004). The essential stakeholder: Advancing the conceptual consideration of stakeholder status for the natural environment. Journal of business ethics, *49*(1): 55-73.

Ein - Dor, P., & Segev, E. (1978). Centralization, Decentralization and Management Information Systems. Information & Management, *1*: 169-172.

Ein-Dor, P., & Segev, E. (1982). Organizational Context and MIS Structure: Some Empirical Evidence. MIS Quarterly, *6*(3), 55-68.

Etzioni, A. (1964). Modern organizations. Englewood Cliffs, NJ: Prentice - Hall.

Evan, W. M., & Freeman, R. E. (1988). A stakeholder theory of the modern corporation: Kantian capitalism.

Fink, A. (2003). The survey handbook (Vol. 1): Sage (Eds).

Fowler, A., & Gilfillan, M. (2003). A framework for stakeholder integration in higher education information systems projects. Technology Analysis & Strategic Management *15*(4): 468-489.

Freeman, R. E. (1984). Strategic Management: A stakeholder approach. Boston: Pitman.

Friedman, M. T., & Mason, D. S. (2004). A stakeholder approach to understanding economic development decision making: Public subsidies for professional sports facilities. Economic Development Quarterly, *18*(3): 236-254.

Grover, V., Henry, R. M., & Thatcher, J. B. (2007). Fix IT-Business Relationships through better decision rights. Communications of the ACM, *50*(12): 80-86.

Guerci, M., & Shani, A. B. (2013). Moving toward stakeholder-based HRM: a perspective of Italian HR managers. The International Journal of Human Resource Management, *24*(6): 1130-1150.

Harvey, B., & Schaefer, A. (2001). Managing relationships with environmental stakeholders: A study of UK water and electricity utilities. Journal of business ethics, *30*(3): 243-260.

Henderson, J. C., & Lee, S. (1992). Managing FPS design teams: control perspective theories. Management Science, *38*(6): 757-777.

Hovelja, T., Vasilecas, O., & Rupnik, R. (2013). A model of influences of environmental stakeholders on strategic information systems planning success in an enterprise. Technological and Economic Development of Economy, *19*(3): 465-488.

Howard, M., Vidgen, R., & Powell, P. (2003). Overcoming stakeholder barriers in the automotive industry: building to order with extra-organizational systems. Journal of Information Technology, 18(1): 27-43.

IJzerman, M. J., Reuzel, R. P., & Severens, H. L. (2003). Pre-assessment to assess the match between cost-effectiveness results and decision makers'information needs. International journal of technology assessment in health care, *19*(1): 17-27.

IT-Governance-Institute, 2005. *COBIT 4.0.*

IT-Governance-Institute. (2003). Board Briefing on IT Governance, IT Governance Institute (2nd Ed.).

IT-Governance-Institute. (2008). Unlocking Value: An Executive Primer on the Critical Role of

 IT Governance (pp. 29): Information Systems Audit and Control Association.

IT-Governance-Institute. (2011). Global Status Report on the Governance of Enterprise IT.

Jansen, H. (2010). The logic of qualitative survey research and its position in the field of social research methods. Paper presented at the Forum Qualitative Social/Forum: Qualitative Social Research.

Jawahar, I., & McLaughlin, G. L. (2001). Toward a descriptive stakeholder theory: An organizational life cycle approach. Academy of Management review, *26*(3): 397-414.

Jeurissen, R. (2004). Institutional conditions of corporate citizenship. Journal of business ethics, *53*(1-2): 87-96.

Jones, T. M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. Academy of Management review, *20*(2): 404-437.

Langley, A. (1999). Strategies for theorizing from process data. Academy of Management review, *24*(4): 691-710.

Magness, V. (2008), 'Who are the Stakeholders Now? An Empirical Examination of the Mitchell, Angle, and Wood Theory of Stakeholder Salience. Journal Business Ethics, 83: 177–192.

Markus, M. L., Ahmed, S., Petrie, D., & Tanis, S. C. (2000). Learning from adopters' experiments with ERP: problems encountered and success achieved. Journal of Information Technology, *15*(4): 245-265.

Markus, M. L., & Bui, Q. N. (2012). Going concerns: the governance of interorganizational coordination hubs. Journal of Management Information Systems, *28*(4): 163-198.

Mason, R. O., & Mitroff, I. I. (1981). Challenging strategic planning assumptions: Theory, cases,and techniques. New York: Wiley.

Messabia, N., Elbekkali, A. (2010). Information Technology Governance: A stakeholder approach. Paper presented at An Enterprise Odyssey, International Conference.

Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook: Sage.

Mingers, J., & Walsham, G. (2010). Toward ethical information systems: the contribution of discourse ethics. MIS Quarterly, *34*(4): 833-854.

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. Academy of Management Review, *22*(4): 853-886.

Mitroff, I., & Linstone, H. (1993). The Unbounded Mind: Breaking the Chains of Traditional Business Thinking. New York: Oxford University Press.

Neville, B., Bell, S. J., & Whitwell, G. J. (2011). Stakeholder salience revisited: Refining, redefining, and refueling an underdeveloped conceptual tool. Journal of business ethics, *102*(3): 357-378.

Olson, M. H., & Chervany, N. L. (1980). The relationship between organizational characteristics and the structure of the information services function. MIS Quarterly, *4*(2), 57.

Parent, M. M., & Deephouse, D. L. (2007). A case study of stakeholder identification and prioritization by managers. Journal of business ethics, *75*(1): 1-23.

Patton, M. Q. (2002). Qualitative Research & Evaluation Methods**.** Thousand Oaks, California: Sage Publications.

Peterson, R. (2004). Crafting Information Technology governance. Information Systems Management, *21*(4): 7-22.

Peterson, R. R. (2004). Integration Strategies and Tactics for Information Technology

Governance. In I. G. Inc. (Ed.), Strategies for Information Technology Governance (pp. 44).

Poulin D., Montreuil B. & Gauvin S. (1994). L'entreprise réseau, Publi-relais.

Pouloudi, A. (1999). Aspects of the stakeholder concept and their implications for information systems development. Paper presented at the 32nd Annual Hawaii International Conference on System Sciences.

Rau, K. G. (2004). Effective governance of IT: design, roles, and relationships. Information Systems Management, *21*(4): 35-42.

Ryan, l. V., & Schneider, M. (2003). Institutional Investor Power and Heterogeneity Implications for Agency and Stakeholder Theories. Business & Society, *42*(4): 398-429.

Sambamurthy, V., & Zmud, R. W. (1999). Arrangements for Information Technology Governance: A Theory of Multiple Contingencies. *MIS Quarterly, 23*(2): 261-290.

Schlichter, B. R., & Rose, J. (2013). Trust dynamics in a large system implementation: six theoretical proposals. *European* Journal of Information Systems, *22*(4): 455-474.

Segars, A. H., & Grover, V. (1999). Profiles of strategic information systems planning. Information Systems Research, *10*(3): 199-232.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. Academy of Management Review, *20*(3): 571-610.

Tavakolian, H. (1989). Linking the Information Technology Structure with Organizational Competitive Strategy: A survey. MIS Quarterly, *13*(3): 308-318.

Wang, P. 2010. Chasing the hottest IT: effects of information technology fashion on organizations. *MIS Quarterly, 34*(1): 63-85.

Wang, P., & Ramiller, N. C. (2009). Community learning in information technology innovation. MIS Quarterly*, 33*(4): 709-734.

Wang, P., & Swanson, E. B. (2007). Launching professional services automation: Institutional entrepreneurship for information technology innovations. Information and Organization, *17*(2):59-88.

Weill, P., & Ross, J. W. (2005). A Matrixed Approach to Designing IT Governance. MIT Sloan Management Review, *46*(2): 26-34.

Weill, P., & Ross, J. W. (2004). IT Governance: How Top Performers Manage IT Decision Rights for Superior Results. Boston: Harvard Business School Press.

Winn, M. I., & Keller, L. R. (2001). A modeling methodology for multiobjective multistakeholder decisions. Journal of Management Inquiry, *10*(2): 166-181.

Wood, D. J., & Jones, R. E. (1995). Stakeholder mismatching: A theoretical problem in empirical research on corporate social performance. International Journal of Organizational Analysis, *3*(3): 229-267.

Appendix A. *Descriptive statistics of the final sample*

Respondents characteristics					Organizational background				
ID	Title	Gender	General Management of IT Experience (years)	Education	Number of IT employees	Industry	IT Units	Organization Number of employees	Ratio of the TI budget
ITE1	IT Architect Leader	M	7	Master	150	Financial services	8	2200	Confidential
ITE2	CIO	M	21	Master	300	Manufacturing & engineering & service	7	16000	2.8%
ITE3	CIO	M	2.5	Master	60	insurance	7	500	1.3%
ITE4	VP IT	M	15	Bachelor's degree	50	service	5	1200	6%
ITE5	VP IT	M	30	Master	3000	banking	20	48000	8%
ITE6	IT director	M	25	Diploma of collegial studies	8	Manufacturing & processing	2	200	5%
ITE7	VP IT	M	25	Diploma of collegial studies	350	service	1	350	Confidential
ITE8	IT director	M	18	Bachelor's degree	30	Agency Government laws	3	120	30%
ITE9	Enterprise Architect	M	15	Master	150	insurance	6	1600	Confidential
ITE10	CIO	M	6	Ph.d.	375	education	5	10000	5%
ITE11	CIO	M	21	Ph.d.	150	Higer education	8	3200	2%
ITE12	CIO	F	23	College D. diploma	25	education	3	2000	1.5%