The Role of Culture in IT Governance

Research-in-Progress

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Abstract

It is important to have an understanding of culture in different level when implementing IT governance. IT governance aims to define decision rights and responsibilities to reach desirable behaviors that direct the organizations for value delivery from IT investments. There is a lack of knowledge on how cultural issues can play a role in IT governance. This paper sets out to provide a review on the literature focusing on role of culture in IT governance. Using a concept centric approach, this paper categorizes the findings from literature through the lens of IT governance five focus areas which are IT resource management, strategic alignment, value delivery, performance measurement and risk management. This paper contribute to the field by providing evidence on how important the role of culture is in IT governance based on the previous literature and reveals the gaps and potential future research in the area.

Keywords

Culture, IT governance, strategic alignment, IT value delivery, risk management, performance measurement, resource management.

Introduction

IT is potentially the key driver of economic capital in the 21st century (ITGI 2003; Benbasat and Zmud 2003). Hence “IT governance” which deals with IT people decision rights and responsibilities for gaining value from IT (Weill and Ross 2004) is one of today managers top concerns (ITGI 2003; ISACA 2011 ). Culture on the other hand plays an important role in implementing and use of IT in organizations (Walsham 2002). Culture has been often recognized as one of the factors when failures happen in IT implementation in organizations and is blamed even without awareness on how it exactly contributed to such failures. Culture with potential constructive or catastrophic effect on organizations management and operations should be reflected by managers while implementing IT governance.

National and organizational cultures can affect the results of the companies’ performance and there is a need for greater studies on interdisciplinary fields that bridge the IT and organizational studies and identify how they interact with each other (Leidner and Kayworth 2006; Kingsford et al 2003; Orlikowski and Barley 2001). The authors pinpoint that in current work environment which is transforming rapidly, both technological and institutional contexts should be considered to understand how the organizations are operating. A theoretical approach is taken by Weisinger and Trauth (2002) to explain the cultural understanding of a firm and prove that it is locally situated. The authors call this phenomena “situating culture”. They conclude that the domestic culture affects interactions and behaviors in an IT workplace and results in unique work practices. Leidner and Kayworth (2006) also believe that culture is a crucial dynamic which explains the interaction among the social groups and IT in an organization. The organizations need to match their technology with their organizational environment to achieve the optimized value from their IT (Hester 2013). Therefore culture as a critical component of organizational environment should be considered.
One of the challenging issues in implementing IT governance is how to respond to different technical, environmental and business changes. The speed and direction of change reaction in organizations influence the way a firm reaches market share, creates competitive advantage and deals with the new business environment challenges (Harison and Boonstra 2009). Ventris (2004) states that the degree to which the organization is able to change and react to the new business issues impacts its business performance in long term. This change ability is dependent on the organizational culture. Laudon and Laudon (2007) argue that technology, task, structure and people are linked with each other and therefore changes in one of them influence the other three. Organizational resistance to change may cause many new projects to fail. The new technology which has been used successfully by one company may face failure in another company due to organizational resistance to it and different organizational cultures. In addition, organizations are working more project-based today and groups have been grown. The way these working groups behave and their beliefs can change the performance of the companies and their adaptation to external issues such as using new technologies (Schein 2004).

Although an increasing amount of literature is dedicated to study IT and organizational context related to IT, research in exploring the particular role of culture in IT governance related issues is in short supply. The aim of this study is to do a literature review on the role of culture on IT governance. Through the lens of IT governance five focus areas, this literature review will be organized and the authors will look for a trace of culture in each of the five focus areas of IT governance in previous research. The results will expose the gaps in IT governance and culture research and will contribute to the knowledge on IT governance research.

This paper as research in progress presents the theoretical background, research methodology and the possible contributions and future research. The literature review will be completed in future by finalizing the evaluation of the articles that fit with the defined search area. The influence of culture on IT governance will be analyzed using the lens of IT governance five focus area.

**Theoretical Background**

First we provide definitions of the key variables used for doing this literature review. This section introduces also the concepts used for defining the boundaries of this research and what exactly the focus of this research is. We explain what pattern is going to be used for organizing the findings from the literature.

**An Overview of Culture**

**National Culture**

According to Hofstede (1984) the culture of a society called the national culture is defined as the shared values, understandings, assumptions and goals that exist in the current society and have been learnt from earlier generations. These shared values and assumptions are imposed by the present members and will be transferred to the succeeding generations. Each member of a national society is born into, not with a given culture. This culture gives directions to the way of living, communication, life and work standards and expectations of the person (Dressler 1976). According to Deresky (2011), it is a critical skill for managers of organizations to have an understanding of the national culture of the environment in which they are running their business. This cultural understanding of the behavior of individuals and groups within the organization brings an advantage for the organizations in competitive industries specially while operating globally.

Different researchers have developed various models and frameworks for studying and understanding national culture. Hofstede’s model is one of the most famous models for characterizing and measuring the national culture. The first version of this model introducing four dimensions of national culture and later the fifth dimension was added to it (Hofstede 2001). The five national culture dimensions are: power distance, individualism versus collectivism, muscularity versus femininity, uncertainty avoidance and long term versus short term orientation (Hofstede 2001).

A project called Global Leadership and Organizational Behavior Effectiveness (GLOBE) also identifies cultural dimensions for distinguishing different societies (Javidan and House 2001). The GLOBE research project was accomplished during seven years of collecting data from a huge number of managers (18000)
The Role of Culture in IT Governance

Javidan and House (2001) introduce nine national culture dimensions including: assertiveness, future orientation, performance orientation, human orientation, gender differentiation, uncertainty avoidance, power distance, institutional collectivism versus individualism and in group collectivism. Some of the GLOBE dimensions are in common with the Hofstede (2001) model dimensions (for instance power distance).

Considering different models and dimensions of national culture of each country, there can be even some connections found among some of the countries. Gupta et al. (2002) used the GLOBE cultural dimensions to find the similarities of different national culture and introduced ten geographical clusters based on those similarities. It is claimed by the authors that the cultural clusters can be used by the multinational corporation managers to lower down the risks and increase the profits by choosing to work in countries in similar cultural cluster (Gupta et al. 2002).

Organizational Culture

Organizational culture is an object of many studies related with its definition, its effects on organizations’ success or failure, its formation and influent factors. It is easy to study and observe obvious and predefined factors in the organizations which may cause to failure or success; for example, leadership failures, marketing myopia, arrogance based on past success, and so on; but in the effort to understand why such things happen, culture as a concept needs to be considered as its own particular definition (Schein 2009). The concept of organizational culture is defined by various approaches and people. Mostly, the organizational culture is expressed from two aspects of practices and values or behavior and beliefs. According to Kostava (1999) organizational culture can be defined as the specific ways that an organizational behaves over a period of time. The organization practices define the organization knowledge and competence. On the other hand the values can also be part of the organizational culture formation. The values in spite of the practices are not visible to the employees and sometimes can be derived from the practices. These values may have different degrees of influence on the organizational culture.

Cameron and Quinn (2011) have developed a strategy for measuring the organizational culture adapting both quantitative and qualitative approaches. They assume the quantitative approach for examining the underlying beliefs and values (culture) and qualitative approach for exploring the surface of the organization (climate). They propose the Organizational Culture Assessment Instrument (OCAI) a dimensional model of the organizational culture based on the Competing Values Framework previously introduced by Quinn and Rohrbaugh (1983). This framework is established on two dimensions of structure and focus of organization, specifying the degree of internal or external focus of the organization and the degree of the flexibility or stability of the organization structure. As one of the most recent models regarding organizational culture we can remark the model called “X Model of Organization Culture” developed by Smit et al. (2008). This model categorizes the organizational culture elements in five clusters named: leadership, strategy, adaptability, coordination and, relationship. Choo (2013) proposes a typology called “information culture” and counts it analogous with organizational culture. The information culture is similar to organizational culture but with a distinctive focus on the cultural norms, values and behaviors regarding the way information is perceived, used and managed in an organization. According to Cook and Rousseau (1988) there may be even subcultures within an organization related to the norms and values shared among sub units of an organization. These sub unit cultures might be different based on the functions of sub units or other characteristics of them.

As a result of globalization and worldwide use of IT, the definitions and models used in organizational culture have also included aspects related with national culture, for instance the model produced by Hofstede (2001) and the studies conducted under the research program GLOBE (Global Leadership and Organizational Behavior Effectiveness) (House et al. 2002).

An Overview of IT Governance

Corporate Governance and IT Governance

The concept of corporate governance and IT governance are linked together. Corporate governance is concerned with both financial and nonfinancial management of business performance (Shleifer and
Vishny 1997). Van Grembergen and De Haes (2009) correspondingly define corporate governance as “system through which the organization is controlled, monitored and organized” (Van Grembergen and De Haes, 2009, p. 4), the authors recognize IT governance as an integral part of corporate governance. Furthermore, Jewer and Mc Kay (2012) point that a comprehensive understanding of the role of IT in business operations and strategies is required to gain successful corporate governance. The authors then emphasize that the corporate governance today differs from the traditional one in terms of its connection with the of IT governance.

According to Sarbanes- Oxley Act which was enacted in United States in 2002, the federal government of U.S. wanted to financially control the markets to assure that the valid performance data and accurate stock valuation can be delivered by organizations (Romano 2005). This act was not directly related to IT but it was soon revealed that organizations needed IT to guaranty such accurate financial data. The IT managers were also encouraged to focus on organizing and managing the business risks of IT processes (Pearlson and Saunders 2013). IT governance is at the heart of organizations activities for meeting the objectives of Sarbanes- Oxley Act and move beyond its certification.

**IT Governance Definition**

According to Wilkin and Chenhall (2010) the term IT governance appeared the first time in the research during the nineties. Loh and Venkatraman (1992) for instance is one of the premier studies that used the term IT governance, they point out that IT governance is starting to be acknowledged as a significant part of IT strategy.

IT governance is the responsibility of executives and the board of directors, and consists of the leadership, organizational structures and processes that ensure that the enterprise’s IT sustains and extends the organization’s strategy and objectives” (ITGI 2003, p.10). Van Grembergen (2007) defines IT governance as "the organizational capacity exercised by the board, executive management and IT management to control the formulation and implementation of IT strategy and in this way ensure the fusion of business and IT” (Van Grembergen 2007, p.1). According to Weill and Ross (2004), governance of IT, which deals with people rights for making decisions about IT is an important factor in the firms chasing for returns from their IT investments and also gaining competitive advantages over the other companies who do not have effective IT governance.

**IT Governance Focus Areas**

There are five focus areas for IT governance introduced by IT Governance Institute (ITGI 2003) which are Strategic Alignment (SA), Resource Management (RM), Performance Measurement (PM), Value Delivery (VD) and Risk Management (RK). Five focus areas of IT governance are based on the stakeholders’ value. The first three (strategic alignment, resource management and performance measurement) are considered as drivers and the other two (value delivery and risk management) are outcomes.

The five focus areas of IT are shown in Figure 1. Most of the IT governance models, frameworks, standards and structures consider these five focus areas when getting implemented. ITGI (2003) defines each criterion as following:

1) **IT strategic alignment**: Ensures a linkage between business and IT plans, defines, maintains and validates IT value propositions and aligns IT and enterprise operations. The main concern relates to the linkage of enterprise business and IT plans with operations.

2) **IT value delivery**: Deals with execution of the value propositions through the delivery cycle, makes certain that IT delivers the promised benefits vs. the strategy. The main concern is on optimizing costs and proving the intrinsic value of IT throughout the delivery cycle.

3) **Risk management**: Ensures risk awareness by senior officers in the organization, a clear transparency and understanding of the organization’s desire for significant risk and compliance requirements and embedding of risk management responsibilities in the organization. The main concern is on embedding accountability to mitigate significant risks.

4) **IT resource management**: Ensures optimal investment and proper management of critical IT resources: applications, information, infrastructure and people. Main concern is on optimizing knowledge and infrastructure. IT resource management area overlays all the other four areas.

5) **Performance measurement**: Tracks and monitors implementation of strategies and projects. This also applies to the use of resources, performance of processes and delivery of services. An example is the
use of Balance Score Card (BSC), which translates strategies into action for achieving goals that are measurable beyond conventional accounting. Key issues relate to setting and monitoring strategies and services.

IT governance is a continuous life cycle that can be entered at any point. Usually the firms start with strategic alignment and after that start the implementation and then delivering value from IT. The risks should be identified and addressed, the performance needs to be measured and the strategy should be monitored regularly. Finally all the life cycle activities can occur only with appropriate IT resource management (ITGI 2003). Additionally; ITGI (2003) declares that the IT governance does not occur in an isolated place and it is influenced by the environment that it is taking place in and this environment is at the same time influenced by some factors such as: “stakeholder values; the mission, vision and values of the enterprise; the community and company ethics and culture; applicable laws, regulations and policies and industry practices” (ITGI 2003, p. 21). This highlights the significant role of environmental factors such as culture in the focus areas of IT governance. This is the foundation for performing this research on finding the specific impact of culture on IT governance five focus areas.

**Research Methodology**

To perform this literature review it is required to (1) identify the key words, (2) find the literature about the topic, (3) select and filter the relevant studies, (4) organize the findings and (5) summarize the findings from literature and write them (Creswell 2011). The technique suggested by Punch (2014) is used to search for appropriate literature. Six steps of Punch (2014, p.100) technique are as follows:

1- Using Boolean logic for key terms
2- Using phrase searching
3- Using proximity operators
4- Using truncates and wildcards
5- Determining database fields
6- Limiting searches

In order to prevent having unmanageable number articles with limited value, we decided to bound the sample articles to those significantly investigating on both culture and IT governance (any aspect of five focus areas of IT governance) and the only language accepted for the articles is English. The search for literature not limited to any specific time period, geographical location or industry and both theoretical and empirical studies are considered. Using the above strategy, the literature search is first conducted on databases of Business Source Premier, Science Direct, IEEE Explore, AIS and ACM digital library and then the similar search is done in the leading journal volumes and related conference proceedings such as MISQ, HICSS and AMCIS. The duplications are found and removed. The databases, journals and
The Role of Culture in IT Governance

conference proceedings used for this literature review are extracted from the bibliographies of the key articles in the same research area. Initially, we find 15 articles in culture and SA, 70 in culture and RM, 4 in culture and PM, 20 in culture and VD and 58 in RK. These preliminary results indicate that the culture role in IT governance has not received sufficient attention both in academic research and in business practices. The initial found articles will be assessed manually by the authors to eliminate those not relevant to the topic and then the remaining articles will be reviewed to determine its method, level of culture (national, organizational or sub-unit), IT governance focused area and key findings. Webster and Watson (2002) suggest the concept centric approach for writing the literature review which is used in this research too. Figure 2 illustrates the perspective through which this study seeks for evidence of cultural impacts on IT governance in the previous literature.

Figure 2. Theoretical approach to the role of culture in IT governance five focus areas

This literature review will be conducted using the lens of five focus areas of IT governance for categorizing the cultural impacts on each of them. A taxonomy of the cultural concepts will be defined and used to present the cultural issues in the selected literature. This taxonomy will be presented as a table containing the classification of cultural values defined by various authors. After reviewing the literature, a concept matrix will also be provided to represent the findings of each article related to each of the five focus areas. When this literature review is completed, only the relevant articles will be selected for review and a final search on the databases will be done to cover any new relevant article. The concept matrix in the end will be filled with the information from each paper specifying what cultural values are investigated and what role culture played in each of five focus areas of IT governance. The context matrix as the result of this literature review will summarize the information on each article including its author(s), studied culture level, methods and findings which are clustered through the five focus areas of IT governance including:

1) Role of culture in IT value delivery
2) Role of culture in IT resource management
3) Role of culture in strategic alignment
4) Role of culture in IT risk management
5) Role of culture in performance measurement

Finally the results of this literature review will demonstrate the concrete knowledge of the role of culture in the five focus areas of IT governance. These will also disclose the gaps from the previous research and give us directions for future research.

Possible Contributions and Future Research

Since this manuscript is a research in progress, the contributions of it are the clarification of how to continue it as a complete research. Therefore in the paragraph below we will present the possible contributions that can be expected when this research is completed.

Although the IT governance has become an important issue in the companies, there is a gap in research about how it can be affected by a significant factor such as culture. This literature review will make an academic contribution by providing an overview of how culture can be important in IT governance and how much research investigation has been done on it. There is a limited number of the research in this
The Role of Culture in IT Governance

area but in order to be able to continue in this field it is needed to review them in details. This literature review will shed light on two important issues. First, the categorized findings will represent which of the five focus areas of IT governance have been studied from the perspective of culture influence on them. Second, this study will summarize the previous findings on which cultural models (for instance national or organizational culture models) have been used the most in IT governance research. Through this knowledge the areas for future research can be introduced. The practitioners can use the findings from this study by comparing the cultural issues mentioned in the literature with the cultural situation in their companies and make their own best practices. Being aware of the importance of culture in IT governance may help the practitioners to prevent failures in IT management and operations.

However the findings of this study should be viewed within the context of its limitations. This study used certain databases for finding the literature and only the articles having their main research focus on cultural issues in IT governance are selected for review. Furthermore the scope of this research is on the cultural effect on IT governance. There may be some research done on other direction which will be the IT governance effect on culture, but in this research we only consider the literature having the first point of view.

At last but not least, finding the gaps in the area and introducing the potential future research are the most significant results of a literature review paper. The intent in this literature review is to reveal which of the IT governance five focus areas have gained less attention by researchers; therefore a future study can investigate on such focus areas and examine the cultural impact on each of them. This future research can be done by considering culture in organizational or national level. There can be different empirical studies accomplished to examine the cultural issues affecting the implementation of IT governance in companies considering one or more than one of the focus areas. Finally there can be some dimensions added to the IT governance practices based on the cultural variables that can improve the IT governance performance.

References

The Role of Culture in IT Governance


