A Survey in Information Systems: Integral Part and a Strategic Partner for Good Corporate Governance

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Abstract

Corporations expanded with no longer being controlled. The failure of multinational companies has become a topic of high interest. Good corporate governance is not only desirable but also a vital business practice. The purpose of this study is to analyse the architectural structure of corporate governance, the problems it faces and how information systems can solve these problems. The question is to what extent modern accounting, integrated in an information system based on current processing and prediction techniques (such as data mining, cloud computing, game theory, business intelligence) may lead to solving these problems in a timely and successful implementation of the best strategies and organizational structures to make a more competitive entity.

Keywords: Corporate governance, information system.
J.E.L. Classification: M14, M15.

1. Introduction

Deep crisis of capitalism is caused by the failure of multinational companies that have grabbed the global economic power, creating monopolies and their own laws that are different from those of the states [37]. The root cause of the recent turmoil is the failure of the dominant economic paradigm - global corporate capitalism. Corporations expanded with no longer being controlled. According to an AlterNet analysis [6], the invisible forces that acted behind them were caused by the failure of their dominant economic principle - global corporate capitalism.

2. Purpose

The purpose of this study is to analyse the architectural structure of corporate governance, the problems it faces and how information systems can solve these problems. A corporate information system is very complex, involving many stakeholders and transactional processes, technologies, procedures and codes of practice. Another problem is bureaucracy. Large corporations have created monopolies, which brought a huge bureaucracy, becoming inflexible and difficult to manage.

3. Question

The question is to what extent modern accounting, integrated in an information system based on current processing and prediction techniques (such as data mining, cloud computing, game theory, business intelligence) may lead to solving these problems in a timely and successful implementation of the best strategies and organizational structures to make a more competitive entity. Business intelligence has proven to be a valuable information system within the firm's strategy and data mining technology can improve the operation of the business [9]. To ensure efficiency and effectiveness of corporate governance, in order to increase company performance and strengthen its position in the capital market, it is necessary to analyse the contribution of information technology in this field.

There are three key research questions that can be asked in relation to of IT:

- Are information systems able to solve the problems of corporate governance and how is this done?
- To what extent managers and board members are aware of the potential benefits of applying information technologies, such as creating value for the company?
- Are they well informed for good IT equipment in line with the company strategy?

4. General theory framework

Discussions on *corporate governance (CG)* and its importance began in the 1930s in the American academic world, while in Europe it began at least 10 years later [7]. The term *corporate governance*, or as defined in ISO FDIS 26000, *organizational governance (OG)* is the system by which an organization adopts and implements the decisions necessary to achieve goals. In other words, the term "governance" means the process of decision-making and the procedures by which they are implemented [8]. So the concept of governance includes how an organization is run. In accordance with corporate governance principles of the Organization for Economic Cooperation and Development (OECD), corporate governance involves a set of "relationship between the managers and shareholders of corporations, as well as stakeholders like employees and creditors" and can be defined as a system that provides a fair and reasonable treatment for investors or more broadly, for the whole society [30]. Also, corporate governance can be defined as a structure used to determine the responsibility and authority of the various groups involved in the functioning of the organization [7].

Broad corporate governance is the set of rules and control mechanisms applied in order to protect and harmonize interests in many cases contradictory of all categories of economic actors (stakeholders) developed within firms. In good corporate governance is expected to pay attention to all stakeholders 'interests including those of employees, creditors, customers, suppliers and local communities [28]. The World Bank defines corporate governance as a combination of laws, regulations and codes of conduct adopted voluntarily and providing companies greater access to financing, lower cost of capital, better firm performance, and more favourable treatment of all stakeholders. Thus, World Bank client countries have initiated legal, regulatory and institutional corporate governance reform projects [36].

Information System can be defined as a collection of components that work together to provide information to management. It enables them to make decision which ensures the control of the organization [3].

Business Information System is a group of interrelated components that work collectively to carry out input, processing, storage and control actions in order to convert data into information products. This information is used to support the activities in an organization [27].

5. Research approach

A recent study on Corporate Governance in 14 emerging markets, found wide variations in performance among companies that apply different levels of governance. Generally, organizations' corporate governance was proportionally as strong or weak as their country's legal system [14]. Corporate governance refers to promoting fairness, transparency and accountability at the company level [5]. A greater focus on corporate governance is largely to answer the collapse of Enron [15], WorldCom, Anderson, Xerox, Merrill Lynch, Allied Irish Bank, Alder Hey, Sellafield, Maxwell, BCCI (Bank of Credit and Commerce International) which led to the subsequent adoption of legislation governing the form of the U.S. Sarbanes-Oxley Act in 2002.

Competitive success of an organization is determined to a large extent on the quality of management and in particular, the organizational, decisive, informational and last but not least by the methodical-methodological subsystems [13]. These subsystems involves the implementation of appropriate tools and techniques to help diagnose problems with organization and to develop an appropriate strategy [24]. Literature associates theory agent with the notion of corporate governance (Agent theory) [12], first developed by Jensen and Mecking (1976), and the Fama and Miller (1972), which integrates modes of organizing complex decision-making process within the company and with signal theory (Signalling theory) [2], which analyses the impact of economic and financial information asymmetry on entity [7]. The Administrator theory describes management leadership role in maintaining and developing the organization's value [19]. Other theories underpinning corporate governance: stakeholder theory and business policy. In the interests of good governance, a company has to draw his own way, taking into account the purpose and objectives [21]. Other theories associated with the notion of corporate governance range from the agency theory and expanded into stewardship theory, stakeholder theory, resource dependency theory, transaction cost theory, political theory and ethics related theories [1].

Continuous development of new IT technologies was followed by a rapid integration of their organizational level. IT has become an essential element in the strategic development and growth performance of any organization. Corporate governance extends in IT area. Therefore we can speak of IT governance as prerequisite for good corporate governance [18]. In this way, IT governance has become an important part of corporate governance [26].

Information Technology (IT) is an integral part of the business. Also, IT Governance (ITG) is an integral component of corporate governance. Especially after Sarbanes-Oxley (SOX) was passed in the U.S. in 2002, followed by similar regulations in many countries, corporate governance and ITG have become more and more connected as the IT control plan is integrated into the overall enterprise plan [28].

One of the problems facing corporations is the complexity of the information system. We live in the age of giant corporations. According to the classification [10], the largest is JP Morgan Chase, which has assets of $ 2,300 billion, i.e. triple gold and foreign reserves held by the European Union, 240,000 employees and offices in 100 countries. Inadequate information and the inability of understanding foreign cultures may cause the failure of a business. Thus, it is important a comprehensive information of value systems, norms of behaviour and to accept the existence of cultural diversity. The current economy has two main characteristics: abundance and complexity of data and speed of change, and thus of decision-making [23]. Information is regarded as one of the most valuable assets of a corporation [34]. Today, instant messaging, email, electronic documents have increased the flow of business [29]. In this context, the question is not whether the Board should take decisions on IT governance, but rather on how they should do so [28].

For years, great amount of data coupled with much insignificant and poor information have been known issues by the leaders of large corporations. The expression "elephant in the room" is relevant. But now, corporate governance and regulatory compliance have made the room smaller and more exposed the elephant bigger and much more noisy [11]. Whether working on a simpler architecture or other more complicated (matrix, conglomerates, strategic alliances), global corporations raises complex management problem - of their activities and the external environment, and this cannot be solved only through effective exploitation of interconnections . In this sense, information system is regarded as the backbone of modern business, playing an important role for a well governed company [20]. Such systems characterized by flexibility and adaptability to changes environmental, concern the poorly structured or unstructured problems that managers must deal [5].

According to recent studies, the implementation of IT governance / CG in corporate structures and corporate governance practices supported adoption of IT in governance leads to creating value for the organization [14]. As a result, many top executives of companies consider their business information technology priorities [20]. IT management has evolved now to include IT Governance (ITG). Thus, IT Governance (ITG) has now become a part of corporate governance [17]. An appropriate information system must be able to establish a balance between the interests of all parties involved in the firm [28]. It involves a management system appropriate to company requirements [33].

In the interests of good corporate governance (CG), corporate information technology (IT corporate) are aligned with the information needs of members of the Board, in order to provide relevant and timely [31]. For good corporate governance (CG), corporate information technology (IT corporate) is aligned with the needs of the Board members, in order to provide relevant and timely information.

The recent economic turmoil forced firms to recognize that, even in good economic conditions, growth does not preclude the need for tangible, accurate data and reliable, transparent analytic processes. Data has the potential of enhancing the IQ of an organization, enabling greater agility and enhanced performance [31].

Thus, IT governance can be seen as an integral part of corporate governance and therefore requires special attention from the top management of the company. Integration of the two forms of government is desirable because it has been shown that both factors have a significant impact on good management [26]. According to a survey [22], 188 corporate executives in Canada indicates that IT plays an important role in ensuring good governance. Firms with integrated IT structure seem to obtain significantly greater profits, up to 20%, than those companies with similar business strategies, but without an integrated IT structure [14].

IT governance implementation may require organizations to rethink the governance structure and the people involved to revive the roles and relationships within the company [26]. IT solutions become more complex and powerful (outsourcing, third party contracts, networking, etc.), among others, due to the inclusion of a broader range of stakeholders [25]. IT solutions in accordance to its strategic objectives, provides flexibility in two ways: adaptation to each specific business environment and openness to change permanent, resulting in value creation for the company [28]. Government decisions usually involve several stakeholders who have conflicting claims, and they can be classified as potential stakeholders, permanent, active and uninterested [16]. Information system can effectively achieve these stakeholders to prioritize and classify them according to importance and role is the objectives of the entity [32].

In addition to the large amount of time spent collecting and analysing data gathered from different departments, business units within large companies are forced to communicate to higher hierarchical levels, an activity which is time consuming, inefficient and bears significant costs. It is also affected accuracy [25]. According to The Banker [35] there are many problems associated with reference data: poor data quality, missing standards, delays in data delivery, bad data coverage and high costs. Many of the challenges technology improve governance requirements imposed on companies and facilitate their application by the company [5]. Automated information flow helps business performance through standardization, automation, simplification and management processes across the enterprise and by providing better internal controls [9]. It would lead to a decrease of information asymmetry and would increase the transparency of all decision-making processes [4].

Information systems contribute to the ability of a corporation to successfully manage many governance requirements. Without the facilities offered by the new technologies available today, more staff and longer time would be required for database management. In addition to the time spent, the accuracy of the data would likely be questionable [25].

IT system is able to understand, in a complete and complex manner, information from production, accounting department, purchasing and sales, inventories, fixed assets. It can also to put together all these parts of the business and make them work together, eliminating incomplete or irrelevant information for the business. Business Intelligence is the key differentiation for business today. Business intelligence, analytics and performance management are top areas for a good management [38]. Database mismanagement may lead to contradictory results, distorting the truth, or a complete lack of information on important areas of business [11].

Regarding the reference data, problems can be many: poor quality of their lack of standardization, delays in data delivery, coverage and high cost of processing data, the growth of data, the desire to improve risk management and compliance with regulatory requirements. Reducing errors and processing costs are often cited as key factors automation reference data within companies [6].

6. Conclusions

A corporate information system is very complex, involving many stakeholders and transactional processes, technologies, procedures and codes of practice. A major concern of managers is the investigation and analysis systems that lead to rapid and accurate diagnosis of the current situation, highlighting the negative phenomena that occur, and appropriate measures and decisions in order to increase companies' performance and to maintain a constant state of competitiveness.

In this context, Information Technology (IT) has become an integral part of the business, a key element in the strategic development and growth performance of any organization. IT system is able to understand in a complete and complex manner. It can put together all the components of a business and make them work, eliminating incomplete or irrelevant information.

So information systems are able to solve all these problems by modern methods of processing, storage, and retrieval and transmission databases. While executives and board members are aware of the potential benefits of applying information technologies, they are often not informed enough for good IT equipment in accordance the requirements of a good corporate governance.

7. References

[1] Awotundun, D. A., Kehinde, J. S., & Somoye, R. O. C. (2011). Corporate governance and stakeholders interest: A case of nigerian banks. *International Journal of Business and Management*, *6*(10), 102-112.

[2] Bini, L., Giunta, F., & Dainelli, F. (2011). Signalling Theory and Voluntary Disclosure to the Financial Market - Evidence from the Profitability Indicators Published in the Annual Report, SSRN Working Paper Series.

[3] Bocij, P., Greasley, A., & Hickie, S. (2009). *Business Information System* (fourth Ed.). New Jersey: Pearson Education, p.87.

[4] Brandas, C. (2011). Study on the support systems for corporate governance. *Informatica Economica*, *15*(4), 55-63.

[5] Brândaș, C. (2007). *Sisteme suport de decizie pentru managementul performant*. Timișoara: Editura Brumar.

[6] Burnett, B. (2012). 5 Reasons Capitalism Has Failed. The root cause of our recent turmoil is the failure of the dominant economic paradigm -- global corporate capitalism. Retrieved November 10, 2012 from http://www.alternet.org/story/152118/5_reasons_capitalism_has_failed?page=1%2C1

[7] Chung-Cheng Hsu, Ming-Jian Shen, Ming-Chia Chen, & Chin-Fang Chao. (2006). A study on the relationship between corporate governance mechanisms and management effectiveness. *The Business Review, Cambridge*, *6*(1), 208-217.

[8] Crowther, D., & Seifi, S. (2011). *Corporate Governance and International Business*. Shala Seifi & Ventus Publishing ApS.

[9] Custis, C. (2012). The role of business intelligence within the hospitality industry's information systems strategy: Historical concepts and future trends. *Journal of Management Policy and Practice*, *13*(3), 82-94.

[10] DeCarlo, S. (2012). The World's Biggest Companies. *Forbes Magazine*. Retrieved November 9, 2012, from http://www.forbes.com/global2000/

[11] Dittmar, L., (2008, Jan/Feb). Governance and Compliance: Driving IT Priorities. *Financial Executive*, 48-51.

[12] Douglas, A. P. (2007). *Corporate Governance and Firm Performance: the Influence of Structures, Processes and Information Technology*. USA: Capella University.

[13] Edelhauser, E. (2011). IT&C impact on the romanian business and organizations. the enterprise resource planning and business intelligence methods influence on manager's decision: A case study. *Informatica Economica*, *15*(2), 16-28.

[14] Estrada C.F. (2010). Aligning information technology within the framework of corporate governance to increase corporate value in Mexico. *International Journal of Management and Information Systems*, *14*(2), 13-18.

[15] Faria, H. J., Morales, D. R., Pineda, N., & Montesinos, H. M. (Dec 2012). Can capitalism restrain public perceived

corruption? Some evidence. *Journal of Institutional Economics*, 511-535.

[16] Fogarty, K. (October 12, 2012). How to Bridge Big Data's Information Gap [Electronic Version]. *InformationWeek*.

[17] Gaines, C., Hoover, D., Foxx, W., Matuszek, T., & Morrison, R. (2012). Information systems as a strategic partner in organizational performance. *Journal of Management and Marketing Research*, 1-17.

[18] Gheorghe, M. (2010). Audit Methodology for IT Governance. *Informatica Economică* , 14(1), 32. Bucharest: Academy of Economic Studies.

[19] Ghiță, M., Iațco, C., Brezuleanu, C. O., & Vorniceanu, M. (2009). *Guvernanța corporativă și auditul intern* (p.67). Iași: Editura TipoMoldova.

[20] Gosling, R. (2006). CORPORATE GOVERNANCE The Ties that Bind - How IT knits together corporate necessities; Business systems can play a vital role in helping organizations achieve good corporate governance, says Robert Gosling. Here's how. *New Zealand Management*, 70-71.

[21] HT Syndication (Oct 2012). There's a very clear pipeline of leadership, Mint [New Delhi]. Retrieved November, 20, 2012, from http://search.proquest.com/business/docview/1112052215/13A5B59F7031C4C19B/1

[22] Jewer, J., & McKay, K. N. (2012). Antecedents and Consequences of Board IT Governance: Institutional and Strategic Choice Perspectives. *Journal of the Association for Information Systems*, 581-617.

[23] Johnson, J.E. (Jul/Aug 2012). BIG DATA + BIG ANALYTICS = BIG OPPORTUNITY. *Financial Executive*, 50-53.

[24] Jordan, E., Musson, D. (2007). Corporate Governance and IT Governance: Exploring the Board's Perspective. *SSRN Working Paper* Series, 446-452.

[25] Knighton, M., & Sheth, B. (Jul/Aug 2008). How Technology Enhances Governance Compliance. *Financial Executive*, 42-45.

[26] Ko, D., & Fink, D. (2010). Information technology governance: an evaluation of the theory-practice gap, Corporate Governance. *Emerald*, 662-674.

[27] Laudon K.C & Laudon, J. (2007). *Essentials of Business Information Systems* (7th Ed.). New Jersey: Pearson Education.

[28] Messabia, N., & Elbekkali, A. (2010). Information Technology Governance: A Stakeholder Approach, an Enterprise Odyssey. *International Conference Proceedings*, 979-997. Zagreb: University of Zagreb, Faculty of Economics and Business.

[29] Myler, E., (2007). Establishing a Corporate Governance Program for Information Management. *AIIM E - Doc Magazine*, 16-20.

[30] OECD (2012). The OECD Principles of Corporate Governance. Retrieved November 9, 2012 from http://www.oecd.org/daf/corporateaffairs/corporategovernanceprinciples/33647763.pdf

[31] Ohata, M., & Kumar, A. (2012). Big Data: A Boon to Business Intelligence. *Financial Executive*, 63-64.

[32] Radu, I. (2006). *Informatica managerială (*p.109). București: Editura Economică.

[33] Sherman, W. R. (2012). The Triple Bottom Line: The Reporting Of "Doing Well" & "Doing Good". *Journal of Applied Business Research*, 28(4), 354-362.

[34] Taylor, P. (May 25, 2012). Extracting value from information [Electronic version]. *Financial Times.*

[35] The Banker (Oct 2012).Corporate statement: Smart stream - Best practice in data governance. Retrieved November 28, 2012, from http://search.proquest.com/docview/1095498070?accountid=133255

[36] The World Bank Group (2012). Corporate governance. Retrieved November 30, 2012, from http://www.worldbank.org/ifa/rosc_cgoverview.html

[37] Toffler, A. (1996). *Corporația adaptabilă* (A. Robert, Trans.). București: Editura Antet. (Original work published 1985).

[38] Van Decker, John E. (2012). What CFOs Want from IT. *Financial Executive*, 66-67.