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Role of Information Technology Governance in Strategic Alignment: A Brief of Indian Organizations

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Abstract

Role of Information Technology (IT) Governance is been an important issue in organization for achieving alignment between business strategy and information technology strategy. This paper has demonstrated the role of IT governance in achieving strategic alignment using Strategic Alignment Maturity (SAM) Model. There are six components of SAM; communication, competency/value measurement, governance, partnership, architecture & scope, and skills. However, this paper is focused on IT Governance component of SAM. The aim of the paper is to demonstrate the contribution of six IT governance items (Business strategic planning, IT strategic planning, Reporting/ organizations structure, Budgetary control, IT investment management, Steering committee(s), Prioritization process) for formulating IT governance and establishing relationship between IT governance and SAM. This study is carried out in 56 Indian organizations.

Key Words: *Business Strategy, IT Governance, IT Strategy, Strategic Alignment Maturity*

Introduction

For more than 30 years, leaders within well run organizations are continually looking for ways to improve IT and business strategy alignment. Recent studies point out that strategic alignment is, among many other issues, the prime concern among IT executives. In the literature, the concept and practice of strategic alignment is widely employed by organizations to pursue synergy between business and IT.

In the beginning of computer era, IT assessment focused almost exclusively in operational and transactional systems. It was from this scenario that all actual IT measures evolved. Measures like output, net availability, processed jobs, etc., are some of production statistics now employed by the majority of data centers managers. Accordantly, detailed project budget and planning data serve to information systems managers as performance indicators of systems development. However, these measures are frequently for internal use, therefore, are purposeless or irrelevant to users of these systems (Singleton, McLean, & Altman, 1988). A more comprehensive approach referring to Value Measurement comes from Kaplan and Norton (2004) work. Their work is based on the fact that traditional financial reports do not provide the foundation to measure and management the value created by the increase in skills of organization's intangible assets. They also believed that what is not measured cannot be well managed.

According to Weill and Ross (2004) the importance of IT governance came gradually over a period of years involving hundreds of conversations with managers and multiple research studies.

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However, after its importance was established it was clear that IT governance is the most important factor in generating business value from IT. This paper is focused on role of IT Governance in achieving strategic alignment (Figure 1).

Literature Review

Strategic Alignment Maturity

Alignment addresses both how IT is aligned with the business and how business should or could be aligned with IT. Whatever term you prefer, the lack of alignment is a persistent/pervasive problem that demands an ongoing process to ensure that IT and business strategies adapt effectively and efficiently together (Luftman, 2005; Luftman and Kempaiah, 2008; Luftman, Kempaiah and Nash, 2006; Luftman and McLean, 2004).

The first strategic alignment model that gained the attention from both practitioners and scholars was the Henderson and Venkatraman's model (1993). It is a combination of four blocks, namely: business strategy, IT strategy, organizational infrastructure and IT infrastructure. The model's authors states that different focus prioritization on the four blocks constitutes a different perspective, namely: strategy execution, technology transformation, competitive potential and service level.

SAM model is composed of six components (Communications, Measures, IT Governance, Partnerships, IT Scope and Architecture, and Human Resources and Skills), each component being made up of a group of elements that in turn are measured using five levels of maturity – from initial to optimize. This work focus on those components that have their focus on people interaction, their partnerships and respective Human Resources policies- communications, Partnerships, and Human Resources and Skills components.

IT Governance

The degree to which the authority for making IT decisions is defined and shared among management. It includes setting IT priorities and allocating IT resources. As per Luftman (2000) SAM framework, the attributes of IT governance are as follows:

- Business strategic planning
- IT strategic planning
- Reporting/organizations structure
- Budgetary control
- IT Organization Structure
- IT investment management
- Steering committee(s)
- Prioritization process

Business Strategic Planning**:** Mintzberg, Ahlstrand, & Lampel (2000) summarize the strategic planning in three premises: strategies should result from a controlled and conscious formal planning, separated in distinct stages, each one delineated by checklists and supported by techniques; in principle, the responsibility for all process is in the hands of the main executive: in practice, the execution responsibility is in the hands of the planners; strategies emerge ready from this process and they should be made explicit to be implemented through the detailed attention to objectives, budgets, programs and operational plans of diverse types. These premises apply to the whole formal planning process, including IT formal planning.

IT Strategic Planning: According to Jiang & Klein (1999) IS planning is "the process of identifying a portfolio of computer-based applications that will assist an organization in executing its business plans and realizing its business goals". Teo & King (1997) and Teo & Ang (1999) assessed the relation between IT and business plans. These last works assessed the evolution of integration between technology and business plan and the impact deriving from this integration.

IT Organizational Structure: According to Weill & Ross (2005), different archetypes count with different decision take structures. As examples of those mechanisms (decision take structures) are cited: teams lead by IT, architecture committees, IT councils, IT councils with conjoint business and IT participation, etc. Typically three interest groups are provided with varying degrees of decision authority in the design of IT governance arrangements: corporative IT, divisional IT, and line management (Brown & Magill 1994).

IT Reporting: Best results can be obtained from IT if a company's main executive of IT ranks near to the main Chief Executive Officer (CEO). Raghunathan (1992) proposed that any significant effect due to rank would decline rapidly the lower the rank of the IS executive, and would be "virtually negligible" when more than two ranks below the CEO.

IT Budget Structure: Venkatraman (1997) presents four interdependent sources of value from IT resources: cost center, service center, investment center and profit center. Whereas, Jensen & Meckling (1998) present five major categories of performance measurement systems: cost centers, revenue centers, profit centers, investment centers and expense centers. Revenue centers are the logical complement to a cost center. The performance measure in such centers is total revenue and they have many of the same problems and advantages as cost centers (Jensen & Meckling 1998).

IT Investment Decisions: Decisions to invest in information systems (IS) are made by many organizations on a very regular basis. Such decisions can vary from quickly identifying the problem, screening options and choosing a solution in a very straightforward way, to very extensive and repeated search, screen, design and negotiation activities that can take many years. Boonstra (2003) identified five factors that result in major differences in IS decision-making processes.

IT Steering Committee: According to Doll & Torkzadeh (1987) standing committees are described as a common top-management tool for establishing policies and guidelines, coordinating viewpoints of line and technical management, and bringing to bear a wide range of judgments. Posterior studies defined MIS steering committee, from now on called simply steering committees, as a representative group of business or line executives who meet periodically to find ways to link the IS resource to the business. Those committees might be viewed as a liaison device that facilitates inter unit coordination and conflict reduction via developing written plans and budgets, setting priorities, and securing funding commitments (Doll & Torkzadeh 1987; Reck & Reck 1989).

IT Project Prioritization Process: The process of prioritizing is concerned with the formal and informal organizational dynamics involved, starting with the initiation of an IST project or investment and culminating in review and approval. In some organizations prioritization process is highly political where the informal dynamics predominate mainly when the importance of considering the competitive environment is stressed. In others organizations the process may be more structured (Bacon 1992; Sowlati, Paradi, & Suld 2005).

Research Methodology

Research Instrument

The study used Strategic Alignment Questionnaire (Luftman, 2000) consisting six components

and 41 items in total through field survey, however only IT Governance element is picked up for this paper to focus on one particular element. There are eight items (Business strategic planning, IT strategic planning, Reporting/organizations structure, Budgetary control, IT Organization Structure, IT investment management, Steering committee(s), Prioritization process) in SAM to represent IT Governance. In our study, we omitted the IT Organization structure and IT reporting items were not assessed due to nominal scales. Remaining 6 items are measured in 5 point liker scale, where 1 is low and 5 is high.

Data Collection

This study adapted Luftman's instrument of SAM to conduct the survey of IT Governance. The paper consist of 56 organizations from five different sectors in Indian industry including IT services, financial services and banking, automobile, pharmaceutical, and telecom. Each organization has more than 5000 employees and at least US$ 100 million annual turnover. We targeted top 500 fortune originations in Indian industry ranked by various secondary sources annually. Still the work is ongoing but for this paper we have complete 56 organizations data to present. We targeted at least 6 responses from each organization out of which 3 from IT executives and 3 from non IT executives. The respondents experience was not less than 7 years. In total, we received total 586 valid responses from executives out of which 311 from IT executives and 275 from business executives. SPSS and Microsoft excel tools are used to do simple uni-variate analysis.

Data Analysis and Findings

We used simple average method to calculate the six IT governance items and their weight on IT governance element. For each component arithmetic mean and other uni-variate measures of all items of IT Governance were computed (Table 1) using SPSS software.

Table 1: Uni-Variate Analysis of IT Governance Items

Attributes of IT Governance	Mean	Weighted Contribution %	Min	Max	Range	Standard Deviation
Business strategic planning	3.36	16.48	1	5	4	1.01
IT strategic planning	3.17	15.55	1	5	4	1.11
Budgetary control	3.28	16.09	1	5	4	1.1
IT investment management	3.40	16.67	1	5	4	1.09
Steering committee(s)	3.70	18.15	1	5	4	1.11
Prioritization process	3.48	17.07	1	5	4	1.02

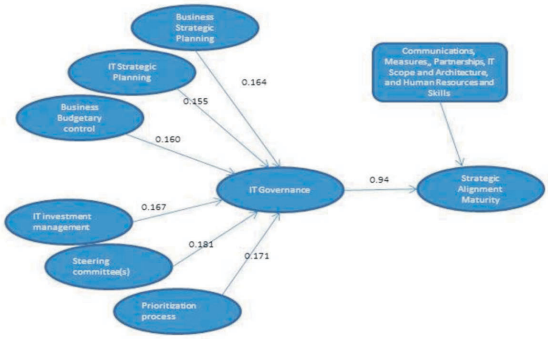

Figure 1: Quantitative Relationship between IT Governance and Strategic Alignment

It is clear from the table 1 that IT Governance items average is between 3 to 4, which indicates that most of the organizations are falling above IT governance maturity level 3 and below IT governance maturity level 4. Weighted contribution shows that the each item is contributing in overall IT governance element.

First, Business Strategic Planning has an impact of 16.48% on IT Governance and this impact seems to be significant. It has the lowest standard deviation. This is well established fact that business strategic planning is one of the low factors in IT governance and coming out in our research too.

Second, IT Strategic Planning has a 15.55 % contribution for formulating IT Governance as reflected from the response across the organizations. The mean is 3.17 and standard deviation is 1.11. IT strategic planning is the lowest priority for Indian organization among all six items.

Third, IT budgeting is very important for IT governance, which has a mean 3.28 and 16.09% contribution for formulating IT governance. It shows the 1.10 standard deviation in responses.

Fourth, IT Investment Decisions has 3.40 mean values while 16.67 % contribution on IT Governance. It has the 1.09 standard deviation as well.

Fifth, the role of Steering committee in IT Governance is very important as far as IT governance is concerned. This variable is turned out highest contributor in IT governance with 18.15 (Mean=3.70) and standard deviation 1.11. Indian organizations are more aware about IT steering committee when making IT related decision.

Sixth, IT Prioritization Process has second highest impact on overall IT governance with 3.48 mean and 17.07 % contribution in formulating the IT governance. The standard deviation is 1.02. Indian organizations are also taking care of prioritization process.

Next, we calculated the correlation between overall IT governance element and overall SAM (average of all six elements). The correlation coefficient is 0.94 which implies that IT governance has significant contribution for achieving the strategic alignment maturity. Using table 1 weights and this correlation coefficient, the final model from this research shown in figure 1. We are not discussing remaining five element of SAM; hence the data is not taken in to consideration. Our model as shown in Figure 1, shows relationship weights between the six elements and IT Governance. According to our model all six elements presented important contribution.

Discussion and Conclusions

IT Governance is an important component for Business/IT Strategy Alignment and reflects in the findings as well as in previous two studies (Rigoni, Dwivedi & Hoppen, 2010; Luftman, Zvi, Dwivedi, Rigoni, 2010). Its contribution resulted in commitment of the business and should not be taken lightly by organizations. The major area of concern is IT strategic planning and strategic business planning in Indian organization and similar findings where there in another study on Brazilian firms as well as on US firms conducted by Rigoni and Dwivedi (2010). Since the research identified that all six IT governance items are important for IT governance. Out of six elements, all are showing moderately positive impact on IT governance.

Raghunathan and Raghunathan (1989) identified that the CIO working close to senior management can help the latter gain the understanding necessary about IT process and products. They also state that a direct line of communication between senior management and the CIO can substantially enhance senior management's ability to utilize fully the potential of its IT as a strategic resource. This in turn can enable firms to better employ IT resources in the creation of products and services as well in internal and customer linking processes. With most

organizations obtaining SAM level 3and level 4 scores, there are still significant opportunities to improve IT business alignment. It is time to enhance and apply existing tools (and the lessons learned from their application) to help organizations improve performance by leveraging IT.

Limitation of the Paper

The first limitation of this paper is that we are limited with the IT governance element only of SAM. We could have taken all six components to discuss whole SAM paper. We are doing the complete SAM study in next phase of research.

References

- Bacon, C. (1992) The Use of Decision Criteria in Selecting Information Systems/Technology Investments, *Management Information Systems Quarterly*, 16(1), 16.
- Boonstra, A. (2003) Structure and Analysis of IS Decision-Making Processes, *European Journal of Information Systems,* 12(3), 195–209.
- Brown, C. and Magill, S. (1994) Alignment of the IS Functions with the Enterprise: Toward a Model of Antecedents, *MIS Quarterly*, 18(4), 371–403.
- Doll, W. and Torkzadeh, G. (1987) The Relationship of MIS Steering Committees to Size of Firm and Formalization of MIS Planning, Communications of the ACM, 30(11), 972–978.
- Henderson, J. and Venkatraman, N. (1993) Strategic Alignment: Leveraging Information Technology for Transforming Organizations, *IBM Systems Journal*, 32(1), 4–16.
- Jensen, M. and Meckling, W. (1998) Divisional Performance Measurement, In Foundations of Organizational Strategy, Harvard University Press, Cambridge, USA.
- Jiang, J. and Klein, G. (1999) Project Selection Criteria by Strategic Orientation, *Information and Management*, 36(2), 63–75.
- Kaplan, R. and Norton, D. (2004) *Strategy Maps: Converting Intangible Assets into Tangible Outcomes,* Harvard Business School Press, Cambridge, USA
- Luftman, J. (2000) Assessing Business-IT Alignment Maturity, *Communications of the Association of Information Systems*, 4(14), 1-50.
- Luftman, J. and Kempaiah, R. (2007) An Update on Business-IT Alignment: A Line has been Drawn, *MIS Quarterly Executive*, 6(3), 165-177.
- Luftman, J. and Kempaiah, R. (2008) Key Issues for IT Executives 2007, *MIS Quarterly Executive*, 7(2).
- Luftman, J. and McLean, E. (2004) Key Issues for IT Executives, *MIS Quarterly Executive*, 3(2).
- Luftman, J. (2000) Assessing Business-it Alignment Maturity, *Communications of the Association of Information Systems*, 4 (14), 1-50.
- Luftman, J. (2005) Key Issues for IT Executives 2004, *MIS Quarterly Executive*, 4(2).
- Luftman, J., Kempaiah, R. and Nash, E. (2006) Key Issues for IT Executives 2005, *MIS Quarterly Executive*, 5(2).
- Luftman, J., Ben-zvi T., Dwivedi R. and Rigoni E.H. (2010) IT Governance: An Alignment Perspective, *International Journal of IT/Strategy Alignment*, 1(2), 13-25.
- Mintzberg, H., Ahlstrand, B. and Lampel, J. (2000) Safari de Estratégia, Brazil/ Porto Alegre, RS: Bookman.
- Raghunathan, B. and Raghunathan, T. (1989) Relationship of the Rank of Information Systems Executive to the Organizational Role and Planning Dimensions of Information Systems, *Journal of Management Information Systems*, 6(1), 111-119.

- Raghunathan, T. (1992) Impact of the CEO's Participation on Information Systems Steering Committees, *Journal of Management Information Systems*, 8(4), 83–96.
- Reck, R. and Reck, V. (1989) Steering IS Committees Straight, *Datamation*, 35(20), 89–92.
- Rigoni E.H, Dwivedi R. and Hoppen N. (2010) IT Governance and Business – IT Strategic Alignment Commitment: A Study of Brazilian Firms, *International Journal of Global Management Studies Professional (IJGMSP),* 2(1).
- Singleton, J.P., McLean, E. R. and Altman, E. N. (1988) Measuring Information Systems Performance: Experience with the Management by Results System at Security Pacific Bank, MIS Quarterly, 12(2), 325–337.
- Sowlati, T., Paradi, J. and Suld, C. (2005) Information Systems Project Prioritization using Data Envelopment Analysis, *Mathematical and Computer Modelling*, 41(11-12), 1279–1298.
- Teo, T. and King, W. (1996) Assessing the Impact of Integrating Business Planning and IS Planning, *Information and Management*, 30(6), 309–321.
- Teo, T. and King, W. (1997) Integration between Business Planning and Information Systems Planning: An Evolutionary-Contingency Perspective, *Journal of Management Information Systems*, 14(1), 185–214.
- Venkatraman, N. (1997) Beyond Outsourcing: Managing IT Resources as a Value Center, *Sloan Management Review*, 38(3), 51-64.
- Weill, P. and Ross, J. (2004) It Governance - How Top Performers Manage it Decision Rights for Superior Results, Harvard Business School Press, Cambridge, USA.
- Weill, P. and Ross, J. (2005) A Matrixed Approach to Designing it Governance, *Sloan Management Review*, 46(2), 26-34.