CHAPTER - II

REVIEW OF LITERATURE

A literature review is a body of text that aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. Until recently researchers have shown interest in the field of corporate governance, emphasizing the role of IT can play for prudent governance. They have carried out numerous studies highlighting the use of information technology in corporate governance. Present section reviews the literature under three categories, namely, information technology, corporate governance and IT governance.

2.1 INFORMATION TECHNOLOGY

Multiple opportunities for strategic use of information technology exist today. More are constantly emerging with the increasing flow of lower cost technologies providing significant new capabilities. And they are increasingly being seized upon as competitive pressures grow (Benjamin, et al., 1983). As the use of information technology continues to grow in business; IT professionals are under increasing scrutiny to demonstrate an impact on business performance. Organizations which do not take advantage of the growing opportunities provided by the electronic technology appear likely to slip behind in the competitive world (Benjamin, et al., 1983).

The interaction between - information technology and a challenging business environment - has generated what might be called the economic imperative of the information technologies. Various researchers have observed that organizations need to take into account various factors (internal and external) affecting it’s’ mechanisms; to develop core competencies and to overcome business risks by enhancing IT capabilities, so as to supplement effective organizations. Many studies have been carried out to determine the link between varied aspects of IT and IT applications and firm performance. The results of the studies have been conclusive, revealing the positive relationship between the two. Despite evidence of a positive
relationship between information technology investments and firm performance, results still vary across firms and performance measures.

Chatzoglou and Diamantidis (2009) argued that previous researchers have mainly dealt with the examination of the existing relationships between the implemented information technology and firm's performance variables. In this vary research study they focused on the IT impact on firm's non-financial IT risk. The research was conducted using questionnaires that were sent to world's five hundred largest corporations and demostrated that IT risk factors affect mainly coordination and partially information ability but not productivity. Furthermore, it was concluded that the most significant risk factors affecting business performance are management ability, information integrity, controllability and exclusivity.

Santos, et al. (2012) studied the volatility of firms' stock prices to news signaling a change in economic conditions, and compared the stock price behavior of firms in the IT industry to firms in the utility and transportation and freight industries. The analysis of the IT industry as a whole indicated that the opportunities for firms to use IT to improve their performance are not diminishing. Authors also found that IT products that provided opportunities for firms to create value at one point in time, later become necessities for staying in business.

Ravichandran and Lertwongsatien (2005) empirically examined how Information Systems (IS) resources and capabilities affect firm performance of 129 firms in the United States. Authors argued that variation in firm performance is explained by the extent to which IT is used to support and enhance a firm's core competencies. The results of the study supported the proposition that an organization's ability to use IT to support its core competencies is dependent on IS functional capabilities, which, in turn, are dependent on the nature of human, technology, and relationship resources of the IS department.

Dao, et al. (2011) on the ground of the resource-based view as the theoretical foundation, developed an integrated sustainability framework, illustrating the integration of human, supply chain, and IT resources to enable firms develop sustainability capabilities. Authors have argued that integration of above stated factors help firms deliver sustainable values to relevant stakeholders and gain
sustained competitive advantage. The study examined, particularly the role of automate, informate, transform, and infrastructure IT resources in the development of sustainability capabilities. Authors while concluding called for a bold new role of IT in sustainability beyond energy consumption reduction.

Stoel and Muhanna (2009) proposed in their study that IT capabilities' impact on firm resources was contingent on the fit between the type of IT capability/resource a firm possesses and the demands of the industry in which it competes. Specifically, using publicly available rankings as proxies for two types of IT capabilities (internally and externally focused), they empirically examined the degree to which three industry characteristics (dynamism, munificence, and complexity) influenced the impact of each type of IT capability on measures of financial performance. In the study authors found general support for the posited contingency model.

Azadeh, et al. (2009) analyzed data from 90 companies in a unique supply chain to identify the relationship between IT and organizational performance. The data included 26 indices about IT and 11 indices about performance. Authors classified the companies with respect to the IT and performance indices (indicators). Then, IT clusters and performance clusters were mapped to one another and, consequently, the relationship between them was explored. In general, the result of the study showed existence of linear relationship between the IT status and performance of the companies, with few exceptions.

Kao and Hawang (2010) applied DEA (Data Envelopment Analysis) model to assess the impact of information technology on firm performance in a banking industry. The results of the study concluded that the impact of IT on firm performance operates indirectly through fund collection. It was further found that the impact of IT increases when the IT budget is shared with the profit generation process.

Duh, et al. (2006) examined the association among strategy, the extent of IT applications to planning and control functions, and firm performance. In the study results indicated that strategy significantly influenced the extent of IT applications for planning and control. In turn, the extent of IT applications had a significant direct effect on firm performance, while the direct effect of strategy was insignificant. The relationship between strategy and the extent of IT applications,
and between the latter and firm performance were found both stronger when the level of impediments to IT implementation was low.

Chen (2012) used organizational theory to discover the strategic role of IT-enabled resources in the firm's competitive agenda. Based on a resource-based view, author stated that IT-enabled resources have synergistic effect on the firm's capabilities, as they, influence the firms' strategic objectives and improve its financial performance. The study emphasized that the technological, human, and organizational resources work together to generate sub-additive cost and super-additive value synergies.

Ordanini and Rubera (2010) in their study investigated the implications of IT innovations and made an attempt to provide a systematic, theoretically informed framework for understanding the conditions that may enhance (or hinder) the potential of IT innovations in a sample of firms. Their proposed model included business and IT resources, both internal and external, that may influence the performance of firms which have applied a pervasive IT service innovation: e-commerce.

Byrd and Davidson (2003) in their study examined the impact of information technology on the supply chain through a survey of 225 large for-profit US firms. Specifically, it involved the determination of IT antecedents to IT impact on the supply chain and the effect that these relationships had on overall firm performance. The findings here suggested that the antecedents, IT department technical quality, IT plan utilization, and top management of IT positively affected IT impact on the supply chain. The results also revealed a positive relationship between IT impact and firm performance.

Haiping and Yongming (2011) proposed that IT capability can be divided into IT capability of base, IT capability of application and IT capability of dynamism. Authors in their study have considered the industry environment as dynamic, complex and comprehensive. The study focused at empirically examining the degree to which three industry environments (dynamism, complexity and comprehensive) influence the impact of each type of IT capability on firm performance. The results indicated close association between IT abilities and firm performance but also concluded that the relationship between IT abilities and firm performance becomes
more complicated when considering industry environment condition.

Aral and Weill (2007) explored two organizational explanations for variations across firms’ IT investments and firms’ performance: differences in firms' IT investment allocations and their IT capabilities. In the study a theoretical model of IT resources has been developed and which define IT resources as the combination of specific IT assets and organizational IT capabilities. Authors argued that investments into different IT assets are guided by firms' strategies (e.g., cost leadership or innovation) and deliver value along performance dimensions consistent with their strategic purpose. The impact of IT assets, IT capabilities, and their combination on four dimensions of firm performance: market valuation, profitability, cost, and innovation were empirically tested. The results demonstrated that IT investment allocations and organizational IT capabilities drive differences in firm performance. Firms' total IT investment is not associated with performance, but investments in specific IT assets explain performance differences along dimensions consistent with their strategic purpose. In addition it was concluded that a system of organizational IT capabilities strengthens the performance effects of IT assets and broadens their impact beyond their intended purpose.

Liu, et al. (2006) empirically investigated the role played by IT in diversified firms with respect to firm performance, emphasizing the complementary relationship between IT and firm diversification. Study concluded that the interaction between IT and related diversification has a significantly positive impact on performance. Further, study indicated the argument that IT when used to leverage the difference in strategic resources can have a positive impact on firm performance.

Chen, et al. (2011) explored the performance of Chinese IT industry, including the managerial, technical and scale efficiencies and their changes over time. The results indicated that on the basis of efficiency convergence analysis the IT companies can make decisions on the functions and strategies shifts that are beneficial to the performance improvement and achieving competitive advantages.

Thouin, et al. (2009) analyzed the effect of the level of low asset specificity IT outsourcing on firm-level financial performance. Authors used transaction cost economics (TCE) as the theoretical basis to explain the effect of the level of network
and telecommunication services outsourced on financial performance. It was revealed in the study that increases in IT budgetary expenditures were found to be associated with increased financial performance. The study supported that IT activities that have become commodities (having 'low specificity') should be outsourced to improve the firm's financial performance.

Zafar, et al. (2011) empirically investigated the impact of a chief information officer (CIO) on firm performance in the event of IT security breaches. In this study, Tobin's q has been used as an indicator of firm performance in the context of IT security breach. Generalized linear squares (GLS) and regression models tested found CIO indeed does have a significant impact at the macro- and micro- levels on firm performance.

Xiang, et al. (2009) investigated the effects of IT investment on firms' financial performance in the insurance industry of South Korea. The findings of the study evidenced that IT investment has a positive impact on both on cost efficiency and organizational growth in South Korea.

Senn and Lee (1996) concluded that there is a highly significant and positive relation between spending for development of the IT staff and performance of the firm, measured by corporate revenue, by undertaking analysis of the three-year IT spending of a sample of Fortune 500/Service 500 firms.

Zhu and Yan (2009) developed an integrative framework of IT, structure and performance to find the impact of IT on organization structure and performance. The empirical results of the study revealed that IT does matter in Chinese environment as IT can help the firms to get more formalization, then better performance. The study also stated that IT has direct impact on organization performance because of early-development advantage.

Nevo and Wade (2011) demonstrated in their study that when an IT asset is combined with an organizational resource, the extent of synergy borne out of the resulting relationship can positively impact the strategic potential of the ensuing IT-enabled resource; this IT-enabled resource, in turn, is positively associated with firm-level benefits. Further, it has also been revealed that the external environment exerts a positive effect on the strategic potential of outside-in IT-enabled resources.
Keramati and Behmanesh (2010) explored the effects of IT usage on 200 Iranian car part suppliers. Canonical correlation analysis revealed a statistically significant relationship between one set of variables consisting seven indices of IT usage, and the other set of variables consisting three company performance indices. The results of the study showed that correlation between company performance and the degree of use of IT in the planning, administration and pecuniary affairs is stronger than the other aspects of IT usage.

Hu and Quan (2005) examined the issue of IT investment impact on productivity using Granger causality model with industry level data over a 30-year period. The results of the study suggested that a causal relationship exists between IT investments and productivity at the industry level. Authors concluded that IT investments contribute to productivity growth in most of the industries in sample they have chosen.

Melville, et al. (2004) developed a model of IT business value based on the resource-based view of the firm that integrates the various strands of research into a single framework and concluded that IT is valuable, but the extent and dimensions are dependent upon internal and external factors, including complementary organizational resources of the firm and its trading partners, as well as the competitive and macro environment.

Tanriverdi (2005) stated that IT relatedness has significant indirect effects on firm performance through the mediation of KM capability. Author proposed that Knowledge Management (KM) is a critical organizational capability through which IT influences firm performance. Empirical analysis of 250 Fortune 1000 firms concluded that IT relatedness of business units enhances the cross-unit KM capability of the firm and also revealed that KM capability creates and exploits cross-unit synergies from the product, customer, and managerial knowledge resources of the firm. The study highlighted that these synergies increase the financial performance of the firm.

Dedrick, et al. (2003) critically reviewed the published research on computers and productivity and developed a general framework based on such literature review. The review concluded that the productivity paradox as first formulated has been
effectively refuted. The study stated that at both the firm and the country level, greater investment in IT is associated with greater productivity growth. At the firm level, the review further concluded that the wide range of performance of IT investments among different organizations can be explained by complementary investments in organizational capital such as decentralized decision-making systems, job training, and business process redesign. Authors have emphasized that IT is not simply a tool for automating existing processes, but is more importantly an enabler of organizational changes that can lead to additional productivity gains.

Oh and Pinsonneault (2007) compared two conceptual (resource-centered and contingency-based) and two analytical (linear and nonlinear) approaches that can be used to assess the strategic value of information technology. Results based on survey data collected from the CEOs and CIOs of 110 firms indicated that the resource-centered and contingency-based approaches provide complementary understanding of the strategic value of IT. The study revealed that the contingency-based approach is better at explaining the impact of cost-related IT applications on firm performance whereas the resource-centered perspective has a stronger predictive ability of IT impact on firm revenue and profitability.

Tanriverdi (2006) examined sources of cross-unit IT synergy and the conditions under which cross-unit IT synergies improve the performance of multibusiness firms. Building on the resource-based view of diversification and the economic theory of complementarities, the study identified the relatedness and complementarity of IT resources as two major sources of cross-unit IT synergy. In a sample of 356 multibusiness Fortune 1000 firms, the study found that sub-additive cost synergies arising from the use of related IT resources or management processes do not have any effects on corporate performance, whereas the super-additive value synergies arising from the use of a complementary set of IT resources and management processes have significant effects on corporate performance. Author also argued that the diversification level of the firm moderates the relationship between IT synergies and corporate performance. The study stated that as the diversification level increases, the performance effects of IT synergies remain positive, but they become weaker.
Sambamurthy, et al. (2003) aimed their study to broaden understanding about the strategic role of IT by examining the nomological network of influences through which IT impacts firm performance. Authors have used a multitheoretic lens to argue that information technology investments and capabilities influence firm performance through three significant organizational capabilities (agility, digital options, and entrepreneurial alertness) and strategic processes (capability-building, entrepreneurial action, and co-evolutionary adaptation). It is further stated in the study that these dynamic capabilities and strategic processes impact the ability of firms to launch many and varied competitive actions and that, in turn, these competitive actions are a significant antecedent of firm performance.

Dewan and Ren (2011) empirically investigated the impact of information technology investment on firm return and risk financial performance, emphasizing the moderating role of the firm boundary strategies of diversification and vertical integration. The results of the study indicated a sharp contrast between the direct and interactive effects of IT on both the return (profitability) and risk (variability of returns) dimensions.

Tanriverdi and Uysal (2011) developed and tested the idea that the Cross-Business Information Technology Integration (CBITI) capability of an acquirer creates significant value for shareholders of the acquirer in Mergers and Acquisitions (M&A). Authors tested the same in a sample of 141 acquisitions conducted by 86 Fortune 1000 firms. The study concluded that in the short run, acquirers that have high levels of CBITI capabilities receive positive and significant cumulative abnormal returns to their M&A announcements whereas in the long run, acquirers with high levels of CBITI capabilities obtain significantly higher abnormal operating performance. It is revealed in the study that acquirers create significantly greater value in complementary acquisitions from different industries than in related acquisitions from the same industry.

Guang Qu, et al. (2010) postulated in the study that, compared with IT outsourcing, IT insourcing is more effective for developing IT Enabled Business Processes (IEBP), which subsequently lead to superior firm performance. Analysis in the study revealed that IT insourcing is positively associated with IEBP, while the relationship
between IT outsourcing and IEBP is not statistically significant. It was further found that IEBP have a significant influence on firm performance. The study also concluded that the effect of IT sourcing mechanisms on IEBP and the effect of IEBP on firm performance are both moderated by the type of innovation related to IEBP. The results appeared to suggest that in order to improve their performance firms should consider IT an integral part of their strategic core and should be proactively involved in the internal development of IT resources.

Zhu (2004) assessed the business value of e-commerce capability and information technology infrastructure in the context of electronic business at the firm level. Empirically tested 114 companies in the retail industry revealed strong positive interaction effect between IT infrastructure and e-commerce capability. The study suggested that their complementarity positively contributes to firm performance in terms of sales per employee, inventory turnover, and cost reduction.

Aral, et al. (2012) tested three-way complementarities among information technology (IT), Performance Pay, and Human Resource (HR) analytics practices. The study found that the adoption of Human Capital Management (HCM) software is greatest in firms that have also adopted performance pay and HR analytics practices. Furthermore, it is revealed that HCM adoption is associated with a large productivity premium when it is implemented as a system of organizational incentives, but has less benefit when adopted in isolation. Authors have argued that the system of three-way complements produces disproportionately greater benefits than pairwise interactions, highlighting the importance of including all three complements.

Su and Yang (2010) highlighted ERP benefits to firm competences in supply chain management on the basis of interviewing experts and conducting surveys in Taiwanese IT firms. The results provided empirical evidence that the beneficial impacts of ERP on the supply chain do lead to better overall SCM competence. It further confirmed that operational benefits, business process and management benefits, and strategic IT planning benefits of ERP in turn enhance firm competences of SCM in operational process integration, customer and relationship integration, and planning and control process integration.
Quan, et al. (2003) studied the impact of IT investments on firm performance and productivity under different market competitions. The study demonstrated that, under duopolistic competition, the effects of IT investments are not as deterministic as under monopolistic competition. Results further showed that the effect of IT investments on productivity, in a duopoly market, are contingent on market sensitivities to changes in the price and quality of products and services offered by the firm and its competitor, as well as on fixed and overhead costs being sufficiently large in relation to market size—an important condition in a monopoly market. Authors have stated that the price sensitivity has a positive effect on the impact of IT investments on productivity and quality sensitivity has a negative effect. It is further submitted that firms are better off making efficiency-enhancing IT investments if the market in which they operate is more price sensitive than quality sensitive.

Straub, et al. (2008) analyzed 5 years of data on 54 Business Units (BUs) in 27 global companies located in seven countries and examined the linkages of these 54 BUs to firm performance. Results of the study have emphasized that IT as a strategic resource alone does not lead to positive business unit outcomes, but the moderating influence of Extent of Control is found to establish the complex statistical relationship with business unit performance.

Koo, et al. (2007) applied Porter's generic strategies to the e-business context and also identified business models that are applicable to the e-business environment and environmental factors. Authors have examined the influence of these factors on firm performance with survey data. The results found that uncertainty has a negative impact on the choice of strategic position of e-business firms, whereas market turbulence positively affects the level of adoption of all the strategies and among the strategic positions, marketing differentiation positively influences firm performance.

Shin (2006) empirically analyzed the impact of IT on the financial performance resulting from diversification by focusing on the strategic direction chosen by different firms. The study has shed light on the business value of IT by showing the importance of complementarity between IT and strategy in firm performance.

Sobol and Klein (2009) studied the linkage of CIO background and attitude toward IT investment as the objective measure of a firm's performance. The results
indicated the financial measures tended to be higher when the CIO was from IT rather than general management, however, an IT manager in a firm that had a strategic orientation to IT rather than a utilitarian one was more likely to have higher financial performance. The study revealed that although a CIO should have a technological background, the CIO who has a strategic rather than utilitarian orientation is more likely to help in forming a highly profitable company.

Chen and Tsou (2012) proposed that customer service is a significant mediator through which IT capability and service process innovation influence the performance of a firm, and that IT capability is also a critical factor that facilitates service process innovation. Empirical results of the study supported their argument and suggested that managerial initiatives should be directed at developing IT capability and service process innovation and leveraging them to facilitate customer service to attain superior firm performance. Furthermore it is concluded that greater IT capability would lead to a higher degree of service process innovation.

Mithas, et al. (2011) developed a conceptual model linking IT-enabled information management capability with three important organizational capabilities (customer management capability, process management capability, and performance management capability). Authors have argued that these three capabilities mediate the relationship between information management capability and firm performance.

Chi, et al. (2010) focused two antecedents of competitive behavior of firms which are access to network resources and use of information technology. Authors have developed a theoretical model to examine the relationships between IT-enabled capability, network structure, and competitive action. The study found that network structure rich in structural roles has a positive direct effect on firms' ability to introduce a greater number and a wider range of competitive actions. However, it has also been revealed that the effect of dense network structure is contingent on firms' IT-enabled capability. The results suggested that IT-enabled capability plays both a substitutive role, when firms do not have advantageous access to brokerage opportunities, and a complementary role, when firms are embedded in dense network structure, in the relationship between network structure and competitive actions.
Rai and Tang (2010) theorized how a firm's Inter-organizational Relationships (IR) portfolio moderates the effects of structural IT capabilities on competitive process capabilities and why a firm's environmental turbulence moderates the effects of complementary process capabilities on competitive performance. The results of the study provided broad support for the structural IT capabilities and process capabilities operating as a system of complements, the effects of structural IT capabilities on competitive process capabilities being contingent on IR portfolio concentration, and the effects of complementary process capabilities on competitive performance being contingent on environmental turbulence.

Ravichandran, et al. (2009) argued that IT by enabling coordination and control in firms is likely to moderate the relationship between diversification and performance. Combining arguments from both resource-based view and the organizational controls literature, authors have theorized about the moderating effects of IT spending under different types and levels of diversification. The results of the study indicated that while IT spending interacts with related diversification to have a positive effect on firm performance, similar interactions with unrelated diversification do not have any effects on firm performance. Furthermore it has been revealed that the interaction between IT spending and geographic diversification is positively associated with performance only when the level of geographic diversification is low.

Wang (2010) examined some of the important organizational impacts of the fashion phenomenon in IT. The study concluded that companies investing in IT in fashion had higher reputation and executive pay, but they had lower performance in the short term and then improved performance in the long term. The study suggested that practitioners should balance between performance pressure and social approval when they confront whatever is hottest in IT.

Kwon and Watts (2006) investigated performance impacts of two types of IT value practices - efficiency and Knowledge Management (KM) by taking two external environmental factors dynamism and hostility into account. Authors conducted a survey of IT managers to assess the environmental conditions under which one mode of value practice or the other becomes more salient. Results of the study
suggested that despite the apparent value of knowledge management in the new economy, IT managers continue to emphasize the traditional orientation of efficiency. It has also been emphasized that when environmental factors are controlled for, KM-based IT valuation clearly pays off for firm performance.

Ramirez, et al. (2010) explored synergies between information technology, process redesign, and firm performance in three ways by analyzing firms entire IT and Business Process Redesign (BPR) portfolio, examining production and market value performance implications, and conducting analysis of 228 firms. Results of the study found a contingent association between IT, process redesign, and performance. It has been revealed that the interaction of IT and BPR portfolios is positively associated with firm productivity and market value. However, study concluded mixed evidence of a difference in these impacts across different types of BPR.

Seyal, et al. (2000) attempted to assess the depth and breadth of IT usage in business. The parameters such as organizational (size, sale or profitability and type of business) and chief executives (educational level and computer literacy, ownership of PC and computer experience) have been studied by the authors. The study has highlighted how sales figure of the organizations, type of business, and CEO computer literacy contributes toward the use of IT. Results also indicated that none of the other variables found to be significant.

Thatcher and Pingry (2007) developed a series of duopoly models of quality price competition and series of monopoly models of quality-price choice to determine the impact of IT investments on organizational profit, productivity and consumer value. The results of the study concluded that IT investments may not result in improvements in business value measures (i.e. generating profits by reducing production costs, improving product quality, improving firm productivity and increasing consumer value). The study has viewed IT investment as a commodity where IT investment does not create a market advantage for the organization.

After reviewing the literature in the above sub-section, it is inferred that the results are conclusive regarding association between IT and firm performance. A group of studies have considered IT and IT applications as an important consideration in valuing firms’ productivity, profitability, innovation and consumers’ welfare.
Researchers have emphasized the IT-usage as an enabler of organizational change and supported the proposition that an organization's ability to use IT to support its core competencies is dependent on IS functional capabilities, which, in turn, are dependent on the nature of human, technology, and relationship resources of the IS department. Studies have also emphasized that organizations should consider other factors affecting business performance like management ability, information integrity and controllability to gauge, manage and improve enterprise IT capability. The studies appeared to suggest that technological (including IT resources), human (including management, board, and executives) and organizational (including management processes) resources work together to generate super-additive value synergies; which in turn has significant effect on corporate performance. The results of the varied studies have provided broad support for IT investments and IT capabilities to have complementarily effect on firms’ performance to attain competitive advantage.

2.2 CORPORATE GOVERNANCE

Recent financial scandals associated to accounting and other frauds allegedly blamed to top company managers (e.g. Enron, Worldcom, Adelphia, Satyam) have brought into public light the recurring question of whether companies are managed on the best interests of shareholders and other company stakeholders such as workers, creditors and the general community. A point that has been made frequently is that top managers may possess too much power inside their companies and that a general lack of accountability and control of their activities is prevalent in companies with wide ownership diffusion.

Although these kinds of scandal are certainly not new, there has been a renewed interest on the mechanisms that can effectively curtail managerial discretion over sensitive company issues that can have an impact on the welfare of the remaining stakeholders. At the same, time, and especially after some well publicised company failures in the late 80s / early 90s (Polly Peck, Coloroll, Maxwell Communications, BCCI), numerous sets of recommendations on corporate governance issues have been published worldwide and adopted, in particular, by many stock market regulators since the seminal Cadbury (1992) report in the UK. This has given place
to a considerable amount of research on the effectiveness of these recommendations in providing better company governance.

Many studies have been conducted so far to identify various aspects regarding the emergence of transparency, disclosure, accountability and socio-ethical norms as essence of prudent governance mechanisms. Numerous studies have also been carried out to determine the link between varied aspects of corporate governance and firm performance; evidence in this regard appears fairly mixed. There has been extensive literature to document a positive relationship between the two, based on identified individual aspects of corporate governance and firm performance whereas others do not find any conclusive evidence in this regard.

Hardi and Buti (2012) provided a comprehensive review of the literature on corporate governance practices and the factors influencing the emergence and impact of those codes in CEE. The study revealed that review of available literature indicates that much work has been done on a significant set of variables of corporate governance, both in the domestic (privatization and the legal environment primarily, institutions and market conditions secondarily) and the international (impact of foreign direct investment, European Union directives and expectations, globalization and global institutions like OECD and the WB) context, but this body of research has not been discussed comparatively, within the context of a holistic model. The study has indicated the importance of a systematic review of macro-level factors, both internal and external from a national perspective, influencing corporate governance practices.

Dashwood (2012) presented a multidisciplinary theoretical framework for explaining the adoption of CSR policies and practices on the part of mining companies, and applies that framework to case studies of two major mining companies with global operations. Author has contributed to the theoretical understanding of how and why firms adapt to changing societal expectations about appropriate corporate behavior by integrating two sets of literatures; constructivism from international relations theory, and learning from organization theory.

Dash (2012) made an effort to study the role of media in addressing corporate governance issues and abuses in India. The study brought together the problems
peculiar to the Indian situation indicating mass media’s scope for having some impact on corporate ethics, regulators’ responsibility and public opinion in India. The study revealed that research on the impact of media on corporate governance is basically done in the context of Western media and democracy. It also stated that there is no attempt to gauge the influence of media reports on corporate governance in India, although the largest democracy of the world has experienced the biggest scandals of unethical governance in the last two decades.

Avison and Cowton (2012) examined and discussed the behavior of companies following revisions to the UK’s revised code. The study has concluded that many UK companies are following many of the provisions of the revised code, but there are areas of non-compliance. In the most significant area of non-compliance (the presence of the chairman on the audit committee), the code was being adjusted in such a way that the actions of most of the companies involved would in future be accommodated.

Ross and Crossan (2012) provided an overview of corporate governance structures in the UK and Germany addressing the extent to which corporate governance structures may have been a contributory factor to the recent banking crisis. The findings from the study suggested that, regardless of the type of governance in operation, current corporate governance rules were not adequate and that a new set of rules is needed in both the UK and Germany.

Bozec and Dia (2012) analyzed corporate governance practices of Canadian companies in the post-Enron period. The results of the study showed signs of convergence. It has been revealed in the study that Canadian companies improved their corporate governance practices in the post-Enron period mainly in areas mandated by regulation. Study found the provisions related to the composition, attributes and working of the board of directors and board committees as areas mandated by regulation. However, results did not indicate significant improvement in non-regulated governance best practices.

Sullivan (2008) argued that anti-corruption attitudes have changed significantly over the past two decades; corruption is no longer regarded as a subject to be avoided and is now widely condemned for its damaging effect on countries, industries, governments, and the livelihoods of individual citizens. Author has posited about
numerous international conventions and global collective action initiatives that set higher standards of transparency and accountability in corporate and public governance.

Afsharipour (2010) argued that since the late 1990s, significant efforts have been taken by Indian regulators, as well as by Indian industry representatives and companies, to overhaul Indian corporate governance. Author discussed various phases of corporate governance reforms in India and concluded that current corporate governance regime in Indian straddles both voluntary and mandatory requirements. Further it has been emphasized that not only have reform measures been put into place prior to discovery of major corporate governance scandals, but both industry groups and government actors have sprung into action following the Satyam scandal.

Afsharipour (2010) evaluated India’s corporate governance reforms and concluded that although extensive reforms have been instituted, there remain significant lapses in implementation and enforcement. The author examined the fundamental areas of concern which include the relationship between controlling and minority shareholders, the role of promoters, the limited activism of shareholders, including institutional investors, and issues with director independence.

Hermalin (2004) demonstrated that starting from a simple model of board monitoring, one can tie together a number of trends in corporate governance. Moreover, this study provided a framework whereby one can consider the consequences of various reforms; for instance, that pressure to have boards that are tougher and more independent of management can have the, perhaps undesirable, feature of leading to greater executive compensation. The study revealed that the linkages among trends are often the consequences or reinforced by subtle or indirect mechanisms.

Becht, et al. (2005) conducted a survey to review the theoretical and empirical research on the main mechanisms of corporate control, to discuss the main legal and regulatory institutions in different countries, and to examine the comparative corporate governance literature. The results appeared to suggest that a fundamental dilemma of corporate governance emerges from this overview: regulation of large
shareholder intervention may provide better protection to small shareholders; but such regulations may increase managerial discretion and scope for abuse.

Sehgal and Mulraj (2008) traced the history of corporate governance in India and discussed key unresolved issues against the backdrop of sweeping reforms in the stock market structure, systems and regulation. Authors argued that the journey from an over-regulated, stunted market to a vibrant, open market has begun in the right direction but both at the macro level of the regulatory framework and at the micro level of corporate compliance, India has to cross several milestones.

Cusolito (2010) presented a model to examine the relationship between corruption in the public sector and concentration of the ownership structure of private-sector media firms. The analytical framework of the study, which is based on models of corporate governance, identified two channels through which media ownership concentration affects corruption: an owner effect, which discourages corruption and a competition-for control effect that enhances it.

Economist Intelligence Unit (2002) presented a report of a survey and concluded that the prime responsibility for good governance must lie within the company rather than outside it. It has been argued in the report that designing and implementing corporate governance structures are important, but instilling the right culture is essential. Further, it has been emphasized that the primary task for the board is to understand and approve both the risk appetite of a particular company at any particular stage in its evolution and the processes that are in place to monitor risk. It has been evidenced from the results that there exists an inherent tension between innovation and conservatism, governance and growth. Transparency about a company’s governance policies has been considered as a critical issue in the results of the report.

UNCTAD (2002) presented an ISAR report to promote transparency and financial disclosure by encouraging the use of internationally recognized accounting and auditing standards and improved corporate governance. The report provided with the deliberations of the ad hoc consultative group of experts on corporate governance disclosure requirements. The ad hoc group conducted informal consultations on best practices for disclosure requirements that developing countries and countries with
economies in transition could implement to promote greater transparency and better
disclosure and thereby increase the flow of foreign direct investment to their
economies.

Yang and Liang (2009) investigated the relationship between corporate governance
and corporate innovation performance. Authors have uncovered a positive
relationship between corporate governance quality, GQ index which is a measure for
shareholder right, and innovation outcome, as well governed firm have higher
innovation productivity. The study concluded that corporate governance quality is an
important determinant of innovation performance.

Chi (2009) investigated whether differences in the quality of firm-level transparency
and disclosure of corporate governance practices help to explain firm performance in
a cross-section of companies in Taiwan. The study evidenced that good corporate
disclosure practices play a significant role in firm performance.

Kathyayini, et al. (2012) investigated the relationship between environmental
reporting and corporate governance attributes of companies in Australia. Analysis in
the study found a significant positive relationship between the extent of
environmental reporting and the proportions of independent and female directors on
a board. The analysis did not, however, support a negative relationship between the
extent of environmental reporting and institutional investors and board size; rather, it
showed a positive relationship.

Esa and Ghazali (2012) investigated if there has been a change in the level of
Corporate Social Responsibility (CSR) disclosure and to determine whether
corporate governance attributes influence CSR disclosure in corporate annual reports
of Malaysian Government Linked Companies (GLCs). The findings of the study
appeared to suggest that the government efforts in promoting CSR among GLCs
through the introduction of the Silver Book in 2006 have had some positive impact
on CSR disclosure in annual reports. The results of the study also implied that larger
board size through wider exchange of ideas and experience could lead to better
appreciation and involvement in corporate social activities and hence disclosure in
annual reports.
Abraham (2012) proposed an incentive framework for corporate executives by utilizing the contributions of information technology. Author has proposed information technology as an “enabler” in intrinsically empowering executives and stakeholders to mutually enhance the corporate governance structure.

Thomsen (2004) argued that the corporate values are determined by corporate governance in a broad sense of the word. Author has emphasized three governance mechanisms: ownership structure, board composition and stakeholder influence. The study appeared to suggest that in smaller companies’ founder-owners often play important role in shaping up corporate value systems whereas in larger companies’ separate ownership and control, managers and boards come to play a powerful role.

Deutsche Bank AG (2004) explored the implications of corporate governance for portfolio management and concluded that corporate governance standards are an important component of equity risk. Their analysis showed that for South Africa, Eastern Europe and Middle East, the performance differential favored those companies with stronger corporate governance.

Fich and Shivdasara (2004) asserted that firms with director stock option plans have higher market to book ratios, higher profitability and they document a positive stock market reaction when firms announce stock option plans for their directors.

Gompers, et al. (2003) examined the ways in which shareholder rights vary across firms. Authors constructed a governance index to proxy for the extent of shareholder rights. The study evidenced that firms in which shareholders had strongest rights enjoyed higher returns, higher sales volume, higher firm value, lesser capital expenditures and corporate takeovers.

Bugshan (2005) investigated the links among corporate governance, earnings management and the information content of accounting earnings. The study has contributed in extensions of the literature on the value relevance of corporate governance. The study has proposed and found that earnings management and corporate governance collectively improve the relations between share returns and unexpected earnings by providing information to investors that helps define their perception of the reliability of earnings.
Hauswald and Marquez (2005) explored a firm’s reliance on internal and external governance mechanisms, recognizing that the choice of one instrument relative to the other is itself part of the governance policy of the firm. Authors have also posited that improvements in dissemination technology lead to more disclosure and more successful external governance, but less board monitoring and internal restructuring.

Arcot and Bruno (2009) argued that companies with a dominant shareholder and those with significant growth opportunities are more likely to deviate from governance standards because of their different monitoring needs. The study indicated that the positive association between performance and corporate governance is limited only to those firms with the highest levels of corporate governance standards or disclosure. The findings of the study appeared to suggest that less transparent companies are associated with entrenchment and an inefficient allocation of company resources.

Bhagat and Bolton (2007) evidenced that better governance as measured by the Gompers, Ishii, and Metrick (GIM, 2003) and Bebchuk, Cohen and Ferrell (BCF, 2004) indices, stock ownership of board members, and CEO-Chair separation is significantly positively correlated with better contemporaneous and subsequent operating performance. Also, the results of the study highlighted the strategic importance of board incentives. Authors’ recommendations on incentive effects of board stock ownership have been found consistent with the implications of Hermelin and Weisbach (2007).

Claessens (2003) investigated the relationship between corporate governance and economic development and well-being. Author argued that better corporate frameworks benefit firms through greater access to financing, lower cost of capital, better firm performance, and more favorable treatment of all stakeholders. It has also been evidenced from the study that when a country’s overall corporate governance and property rights system are weak, voluntary and market corporate governance mechanisms have limited effectiveness.

Bebchuk, et al. (2004) investigated the relative importance of the 24 provisions followed by the Investor Responsibility Research Center (IRRC) and included in the
Gompers, Ishii and Metrick (2003) governance index. The study demonstrated that increases in the index level are monotonically associated with economically significant reductions in firm valuation as well as large negative abnormal returns during the 1990-2003 period i.e. adding more provisions to an index is hardly bound to be beneficial; in this area, less can be more.

Brown and Caylor (2006) supported the Bebchuk, et al. (2004) findings that only a small subset of provisions marketed by corporate governance data providers are related to firm valuation, and the Cremers and Nair (2005) evidence that both internal and external governance are linked to firm value. The 51 governance provisions were considered for the study which included five that are relevant to accounting and public policy: stock option expensing, and four that are audit-related. Analysis did not find any of these five measures to be related to firm valuation. Further, authors documented that only one of the seven governance provisions important for firm valuation was mandated by either the Sarbanes–Oxley Act of 2002 or the three major US stock exchanges.

Hermalin and Weisbach (2007) argued that, from a corporate governance perspective, there are likely to be both costs and benefits to increased transparency, leading to an optimum level beyond which increasing transparency lowers profits. The results of the study indicated that reforms that seek to increase transparency can reduce firm profits as better transparency is not free, can raise executive compensation, and can also inefficiently increase the rate of CEO turnover.

Balasubramanian, Black and Khanna (2009) provided a detailed overview of the practices of publicly traded firms in India, and identified areas where governance practices are relatively strong or weak, relative to developed countries. Authors have also examined whether there is a cross-sectional relationship between measures of governance and measures of firm performance and found evidence of a positive relationship for an overall governance index and for an index covering shareholder rights. The results of the study indicated that the association is stronger for more profitable firms and firms with stronger growth opportunities.

Klein (1998) studied whether the existence and staffing of board committees affects the firm performance. Author found little evidence that monitoring committees-
audit, compensation and nominating committees, usually dominated by independent directors affect performance, regardless of how they are staffed.

Bhagat and Black (1997) undertook study to determine whether the proportion of independent or inside directors affect firm performance and found no consistent evidence that the proportion of independent directors affects firm performance, across a wide variety of stock price and accounting measures of performance. Bhagat and Black (2002) found no linkage between the proportion of outsider directors and Tobin’s Q, return on assets, asset turnover and stock returns.

Dalton, et al. (1998) showed that board composition had virtually no effect on firm performance and that there was no relationship between leadership structure (CEO/Chairman) and firm performance.

Ellstrand and Johnson (1999) indicated that board composition whether measured by proportion of inside directors, affiliated directors or independent directors is unrelated to corporate financial performance.

Some of the studies reviewed above concluded the various indicators which define good corporate governance practices. With the emergence of the concept and need of corporate governance regulatory reforms have focused on transparency, disclosure, ethical behavior, boards’ role, and recognized governance standards as the essence of prudent governance mechanisms. Further, the above sub-section also throws light on the various studies conducted to observe relationship between corporate governance and firm performance. Various researchers have observed that limited board size, board composition, board meetings have positive impact on firm performance. Similarly, separate CEO and chairman, high accounting disclosure standards also result in improved firm performance. Apart from taking single governance measure, some studies are based on composite corporate governance indices comprising of varied governance categories and observed them highly associated with firm performance.

However, some of the other researchers did not find any linkage between corporate governance and firm performance. They found that existence and staffing of board committees, proportion of independent directors or inside/outside directors have no
effect on firms’ performance measured in terms of Tobin’s Q, return on assets, asset turnover and stock returns. Similarly, no relationship was found between leadership structure (CEO/Chairman) and firm performance.

2.3 IT GOVERNANCE

There is an increasing call worldwide for boards of directors and governing bodies to take responsibility for the governance of IT assets (ITGI, 2003) in much the same way as they govern an organization’s financial and reporting processes. The pervasiveness of IT within most commercial and public organizations has placed increased pressure on overseeing the effectiveness of IT. The current IT environment is entrenched in the business environment and requires regulatory compliance, cost control, availability, risk management, alignment with the business, timely project delivery, change and innovation in order to deliver stakeholder value. The successful application of IT Governance (ITG) principles can provide a mechanism to increase the effectiveness of IT and, in turn, meet the increasingly high demands from business for IT (PWC, 2006). IT governance has become more prominent worldwide in the past few years. The motivation behind this sub-section is to review ITG literature that stems from the growing dependency of organizations on IT resources (ITGI, 2006c) and their increasing need to better manage/govern these significant IT investments (ITGI, 2007).

Research literature on ITG is diverse and expansive, emanating from business, organizational, and information technology research paradigms. The ITGI has identified that IT governance consists of five key focus areas (ITGI, 2003). This section focuses on synthesizing the research studies on ITG depicting the significance of ITG and studies presenting the association of five ITG domains as identified by ITGI, 2003 with firms’ performance. The key focus areas are IT strategic alignment, IT resource management, IT performance management, IT risk management and IT value delivery.

Lunardi, Becker and Macada (2009) verified if companies which have adopted IT governance mechanisms improve their financial performance, examining changes on performance pre and post adoption controlling for industry mean changes. The study
concluded that companies which have adopted IT governance practices improved their performance when compared to the control group, especially regarding about profitability measures. Furthermore, it has been found in the study that effects of IT governance mechanisms adoption on financial performance are stronger in the year following adoption than in the year which IT governance was adopted.

Abu-Musa (2007) explored the current performance of information technology governance in Saudi organizations using the balanced scorecard model introduced by the ITG Institute (ITGI, 2005). An empirical survey was carried out and the same revealed that the vast majority of respondents reported the importance of ITG performance measures. The results of the study suggested that Saudi organizations should achieve better governance of their IT in order to ensure that an organization’s IT strategy is aligned with and supports the overall organization’s strategy— that IT supports the organization’s ability to exploit opportunities and maximize benefits.

Weill (2004), Weill and Ross (2004) identified five main factors that relate to variations in governance patterns being strategic and performance goals, organizational structure, governance experience, size and diversity, industry and regional differences. Authors have developed ITG arrangements matrix which demonstrates the interactions between governance archetypes and decision domains. They have evolved two types of top performers being top ITG performers and top financial performers.

Luftman, Lewis and Oldach (1993) identified IT governance as the extent of ownership of technology or the possibility of technology alliances or both. Authors have provided further explanation and elements of IT strategy, IT infrastructure and processes, strategic fit and functional integration. They have considered these four domains to be interrelated.

Henderson and Venkatraman (1993) identified the same four domains as prior model but revised the components of these domains. Authors have identified the same two dimensions as prior model. Hence, supported the views of Luftman, Lewis and Oldach (1993)

Henderson and Venkatraman (1991) developed Strategic Alignment Model (SAM)
and have identified 2 dimensions (strategic fit and functional integration) and 4 domains (business strategy, IT strategy, organizational infrastructure and processes and IT infrastructure and processes) of strategic alignment.

Maes, et al. (2000) developed a model as an extension of work of Maes (1999). Authors have evolved Unified Framework for Alignment by developing a generic framework for the business-IT relationship and an Integrated Architecture Framework. The study has identified 6 key constructs of business-IT alignment being strategy, structure, operations, business, information and communication and technology.

Van Lier and Dohmen (2007) discussed the links between benefits management and strategic alignment and their influence on IT outsourcing. Authors have discussed models for each of the issues and found that case studies with higher strategic alignment and benefits management are linked to IT outsourcing success.

Silvius (2007) emphasized the importance of strategic alignment for organizations and presented a series of theoretical models identifying different aspects of strategic alignment. The study has provided with practical strategic alignment issues identified in focus group discussions with 23 chief information officers and IT managers and also has identified strategic alignment maturity levels for pilot study participants who were 12 Dutch firms.

Beimborn, et al. (2007) tested links to recent alignment literature for assessing the impact of strategic alignment on system usage and success of business processes. Authors found that IS usage is directly linked to strategic alignment between business and IT units and internal alignment between organizational units. Furthermore, it has been revealed that IT staff did understand business needs.

Wagner, et al. (2006) examined usage, alignment and experience constructs of the three branches of a retail bank employing identical information systems and credit co-operative banks. Authors have provided insights into the importance of alignment in operations. The results of the study evidenced positive impacts between alignment and IT usage.

Tallon and Kraemer (2003) surveyed data from 63 firms and found a positive and significant relationship between strategic alignment and IT payoffs, a relationship
that holds for all firms, irrespective of their strategic intent or goals for IT. However, study also evidenced that while strategic alignment can lead to increased payoffs from IT, this relationship is only valid up to a certainpoint beyond which further increases in strategic alignment appear to lead to lower IT payoffs.

Ness and Bani (2011) provided empirical evidence to support that IT-business strategic alignment has a stronger positive correlation with school districts’ IT Effectiveness (ITE) than IT Flexibility (ITF); therefore, tighter IT-business strategic alignment and responsiveness were found critical and valuable for school districts’ IT effectiveness and business productivity. The research findings have depicted that ITF has no overall impact on ITE; but, ITE in school districts is ultimately decided based on their IT-business strategic alignment. In addition, study concluded that sufficient ITF could be considered as an enabler and a prerequisite component for an advanced maturity level of strategic alignment in school districts.

Motjolopane and Brown (2004) recognized that achieving alignment contributes immensely to ensuring that investments in IT result in improvements in organizational performance. The study has reported a case study in which it has been found that integration between business and Information Systems (IS) planning, rational-adaptation in IS planning, IT managerial resources, and IT implementation success are all factors likely to influence alignment. However, authors have revealed that their relative importance is very much dependent on the organizational context, the timing of the study, and on whose perspective is being sought.

Byrd, Lewis and Bryan (2006) empirically examined the influence of the alignment between IS strategy and business strategy (strategic alignment) on the payoff of IT investment. The results of the study indicated that there is a synergistic coupling between strategic alignment and IT investment with firm performance.

Tallon and Pinsonneault (2011) surveyed IT and business executives in 241 firms, and found a positive and significant link between alignment and agility and between agility and firm performance. Authors have concluded that the effect of alignment on performance is fully mediated by agility, environmental volatility positively moderates the link between agility and firm performance, and agility has a greater impact on firm performance in more volatile markets. The results of the study
indicated that IT infrastructure flexibility does not moderate the link between alignment and agility, except in a volatile environment; however IT infrastructure flexibility has a positive and significant main effect on agility.

Avison, et al. (2004) tested Strategic Alignment Model (SAM) (Henderson and Venkatraman, 1993) by applying data from completed projects to determine the usefulness of this model in financial services firm in Australia. The results of the study indicated that SAM model found to have conceptual and practical value.

Smaczny (2001) explored whether Henderson (1990) strategic alignment model (SAM) is still applicable. On the basis of detailed literature review of strategic alignment models, author has proposed new strategic alignment model. He has proposed that fusion be considered the future method of aligning business-IT and has also considered SAM model out of date as sequential in orientation.

D’Souza and Mukherjee (2004) in their study have considered practical challenges associated with achieving successful business-IT alignment and have identified four macro trends which will impact on adoption of IT over next decade. The study has highlighted four critical tasks that managers should undertake to achieve successful BIT alignment i.e. take measured steps, identify critical factors that affect your organization’s IT-business alignment, employ a phased process of implementing IT business alignment processes and be prepared to make structural changes to the organization.

Van Der Zee and De Jong (1999) presented a new framework for IT and business alignments based on integration and have used the concepts of balanced business scorecard in two case studies of small bank and national food retailer. The study has concluded that business balanced scorecard could be a valuable contributor to implementation of an integrated business and IT planning and evaluation process.

Bruce (1998) considered business and IT alignment as a necessity not a luxury. Author has identified the ways companies use IT to achieve positive impact on shareholder value. The study has revealed that consequences of not aligning are missed opportunities (strategic and tactical). The study has concluded culture, decision making processes, customers, investments, organization, performance
measures, and strategy as keys for operationalising alignment.

Tallon (2007-08) surveyed IT and business executives at 241 firms, and found a positive link between alignment and perceived IT business value in each of five primary processes in the value chain. The results of the study have shown a need for managers to reconsider the steps taken to align IT and business strategy by looking more closely at how IT can support individual processes rather than at how IT can support an entire strategy.

Broadbent and Weill (1993) explored business and information strategy alignment in the information intensive and competitive Australian banking industry. For the study, data collected from multiple sources evidenced was sought for the alignment of business and information strategies through the use of information and information technology that provided a comparative advantage to an organization over its competitors.

Luftman and Brier (1999) surveyed executives attending classes at IBM’s Advanced Business Institute to identify enablers and inhibitors of strategic alignment. The results concluded 6 most important enablers and inhibitors of strategic alignment; enablers included senior executive support for IT, IT involved in strategy development, IT understands the business, business/IT partnership, well prioritized IT projects and IT demonstrates leadership whereas IT/business lack close relationships, IT does not prioritize well, IT fails to meet its commitments, IT does not understand business, senior executives do not support IT found to be the inhibitors.

Papp (1999) studied 18 financial measurements and firm’s reputation for the effect on firm’s alignment perspective. The results of the study identified 7 measures as linked to strategic alignment within organizations being anticipated performance, liquidity, income, growth, net profitability, earnings and debt-to-equity.

Coughlan, Lycett and Macredie (2005) examined perceptions of the business-IT relationship by interviewing major UK bank/ top level management from retail and IT departments. The study revealed 9 key themes which relate to communication in the strategic alignment domain. The study has emphasized that organizations needed
to implement better mechanisms of communication to improve strategic alignment.

IT Governance Institute (2005e) identified importance of strategic alignment and discussed role of CEO, Board and CIO in achieving strategic alignment. The results of studies indicated business-IT alignment to be very important. However, it has also been revealed that half of survey respondents did not have a formalized governance process to ensure effective business and IT alignment.

Kearns and Lederer (2003) assessed the influence of information intensity on strategic alignment. Authors conducted a field survey of 161 chief information officers and concluded that information intensive firms are more likely to knowledge share and thus have stronger strategic alignment.

Reich and Benbasat (2000) examined the influence of several factors on the social dimension of alignment. They tested both short term and long term alignment aspects within the business units. The study has identified the most predictor of alignment was a high level of communication between IT and business executives and creating an environment in which shared domain knowledge can grow.

Bushell (2007) in the conceptual study drew conclusion from data of industry surveys regarding discussions of central vs federated models of IT organizational structures. Author has identified that 77% of organizations surveyed by CIO magazine used a centralized model of IT organizational structure. The study has revealed that federated model cannot be an effective structure unless governance is right.

Wilcocks, Feeny and Olson (2006) examined 9 capabilities included ITG, business system thinking, relationship building, designing technical architecture, making technology work, informed buying, contract facilitation, contract monitoring and vendor development. The results emphasized that organizations need to develop long-term strategic focus by applying all 9 capabilities. It is further concluded that core IS capabilities are related to governance mechanisms in place.

Wilcoxon and Chatham (2006) investigated the personal and behavioural characteristics of IT and general managers and compared these to reported leadership behavior research. In the study, IT managers were found to have a
preference for decision making based on logic and objectivity rather than on emotions and feelings. The results revealed a strong contrast between leadership styles for IT and general managers which suggested a different approach to managerial roles which indicates a greater task orientation on the part of IT managers.

De Haes and Van Grembergen (2004) defined ITG and explained its relationship to enterprise Governance. Authors have posited that effective governance is determined by way IT function is organized and where the IT decision making authority is located within the organization. The study has identified the key to effective IT governance is the relational mechanisms between business and IT staff and ongoing knowledge sharing between departments.

Meyer (2004) conducted the study to identify five organizational systems of governance that can be applied to IT governance. In conceptual study author has found that culture, structure, internal economy, methods and tools, and metrics and rewards are all important aspects of systemic IT governance mechanisms.

Peterson (2004) presented a holistic view of IT governance and considered that the structural, process and relational capabilities are all important aspects of effective ITG. Author has developed ITGAP model for use in assessing the effectiveness of organization’s ITG architecture. The ITGAP model framed in the study posits that ITG consists of IT value drivers, ITG capability, ITG complexity and IT value.

Rau (2004) in the conceptual study presented ideas and concepts on the way to govern IT. Author has presented an IT governance design structure that encourages participation from all stakeholders. In the study, a best practice IT organization governance design has been developed. The study revealed that effective IT governance takes considerable time to achieve.

Sherer (2004) examined whether the prioritization of IS projects should be part of the strategic vision of the organization and considered that reporting structure of IS organization and the involvement of a steering committee for investment prioritization are key influences on final IS project selection. To assess the same, a model of IT selection process based on strategic vision has been framed in the study.
Author has concluded that strategic vision affects IT governance decisions.

Schwarz and Hischheim (2003) developed a model of IT governance to explore difference in perceptions toward IT and the organization of IT activities. Authors found differences and similarities between firms with respect to IT capabilities, relational and integration mechanisms, measures of success and relationships with business units. The results of the study indicated that organizations are now focused on two way relationship oriented approach to management of IT structure.

Young and Jordan (2003) developed an understanding of how senior management influenced IS project success. They have postulated that mature IT governance is characterized by accountability to transparently resolve conflicts of interest between multiple stakeholders. The study has concluded that senior managers influence success by committing time to be made aware of issues and actively participating to resolve conflict. It has also been further argued in the study that board should take a monitoring role to ensure that the benefits are delivered and failing projects are terminated. Authors have considered passion of stakeholders as the key indicator of success and governance.

Kim (2003) examined the effects of IT on the governance of firms that are using IT for competitive advantage. The study concluded that increased use of firm specific IT is found to be associated with decreases in outsourcing and increases in number of employees. Furthermore, it has been revealed in the study that the use of relation specific IT is negatively related to the degree of vertical integration.

Sohal and Fitzpatrick (2002) surveyed senior IT officers in 59 large Australian organizations to compare IT usage levels between three levels of intensity. The results of the survey revealed that the more involved senior management was in IT decision making, the more likely management will accept the role of IT in the success of their organization.

Dahlberg and Lahdelma (2007) surveyed 109 senior executives from 20 enterprises to examine the role of ITG maturity evaluations by senior executives and their links to outsourcing. The results of the study indicated links between ITG and outsourcing.
Warland and Ridley (2005) conducted the study to determine the level of awareness and understanding of IT Control frameworks i.e. CobiT, ITIL etc. The results of the semi-structured interviews concluded that there was little adoption of formal or informal IT control frameworks in the Tasmanian State Government.

Van Grembergen, Saull and De Haes (2003) discussed Balanced scorecard method, IT BSC and its elements. The study has concluded that development and application of firm specific IT BSC would assist with establishing IT governance best practice in the organization. Furthermore, the study identified that strategic ITBSC should be cascaded into operational services, governance services and development services scorecards.

Van Grembergen (2000) discussed how the IT Balanced Scorecard (ITBSC) can be linked to the Business Balanced Scorecard (BBSC) to support IT/business governance and alignment processes. Author has argued that using a cascade of scorecards linking Business BSC to ITBSC and then to IT strategic, IT development and IT operational scorecards, IT governance measures and concerns will be identified to top management.

Du, et al. (2006) assessed risks in IT development projects under different conditions. Authors have focused on three conditions: the perceived control over the IT project, use of an attention shaping tool and the expertise of the individual conducting the assessment. The results of the study indicated that perceived control influences risk perception but not behavior. It has also been revealed that high expertise participants identified higher levels of risk in IT projects.

IT Governance Institute (2006b) argued that IS governance is responsibility of board of directors and senior executives and consists of leadership, organizational structures and processes that safeguard information. The publication has outlined the benefits of information security governance and the role of boards and management in monitoring information security governance and also has provided with a guide for self-assessment of Information security governance practice.

Pareek (2006) made a discussion of the risk and reward correlation graph and has identified key types of risk i.e. market, credit, exogenous and operational. Author
has discussed effective risk management strategies and risk mitigation tools and enablers. The study has argued that risk management should be important for every manager and organizational culture should focus on risk identification and management across the organization.

Ross (2006) examined the issues associated with the relationship between information security and Business Continuity Management (BCM). Author has identified BCM and security as two points on a spectrum of risk management. The study has indicated that BCM is the loss caused by a physical event and security is a loss caused by a logical event. The results of the study have found a link between business continuity and security. It has been emphasized in the study that business continuity plans should include outages of all sorts, not just disasters (i.e. planning to improve recoverability from logical events).

Gerber and Von Solms (2005) identified a growing need for protecting information from risks faced globally. Author has developed a model of risk management and links to three research paradigms i.e. natural science, theoretical science and social science.

IT Governance Institute (2005c) presented a number of considerations for security managers on Information security governance. The study aimed to develop a holistic view of risk, developed an important resource for security managers which outlines key issues for consideration, the information sources relevant to these issues, the evaluation and performance criteria related to each issues and security program initiatives related to each issue.

IT Governance Institute (2005d) defined and discussed information risk management. The publication has identified a number of key risks facing organizations and discussed survey results from a global IT survey. The results of the survey indicated that to enable effective governance IT risks should be identified as strategic, program, project or operational risks.

Van Solms (2005) discussed the relationship between information security operational management and information security compliance management. Author has defined and identified key components of the two separate dimensions of information security governance. The study has considered information security
governance as an integral part of good IT and corporate governance. The study has recommended that information security operational management and information security compliance management be recognized as two separate dimensions of information security governance. The study has also supported the argument to establish a separate information security compliance management department.

Broadbent, Kitzis and Hunter (2004) identified new IT risks which CIO’s must take responsibility for: Business interconnections, regulatory compliance, consumer demand for privacy protection and rising costs of IT failures. They have discussed provided with 4 ways of coping with risk: mitigation, transfer, acceptance and avoidance. The study has argued that there is CIO’s need to establish a good risk management process which identifies targets and threats, and calculates associated risk and potential loss.

SAS Ltd (2004) reported International benchmark survey into operational risk management in the financial services industry. It has been revealed in the survey that 20% of respondents do not have an operational risk program. Furthermore, the survey concluded that IT and systems failure is the biggest source of operational risk.

Hadden, DeZoort and Hermanson (2003) conducted a survey to assess audit committee members perceptions of their oversight of 34 specific IT risks. The study suggested that audit committees could be involved in IT risk oversight. It has been evidenced from the study that audit committee members perceived their personal qualifications to oversee IT risks as moderate and also, the survey posited that audit committee oversight role was assessed to be below moderate. Further, it has been revealed in the study that audit committee involvement in IT risk oversight to date has been reduced by the committee’s reliance on top management to address IT risks.

Pironti (2006) outlined 5 basic outcomes which can result from an effective governance approach to information security. The results of the study supported the notion that properly governed information security is important to organizations.

Bahli and Rivard (2005) considered three major sources of risk factors for IT
outsourcing – the transaction, the client and the supplier. The study demonstrated that organizations need to pay attention to risk factors as a source of risk in IT outsourcing situations. It has been concluded that project risk assessment helps the organization to determine which outsourcing project to be undertaken.

Qi R. (2012) examined the relationship between IT and corresponding performance, including revenue and profit. Author has analyzed 34 firms that enter top 100 electric enterprises over the period from time-series data. The study presented an analysis framework of evaluation of IT value and concluded three factors that inference IT evaluation which are: IT value is various; IT value is indiscernible and IT value is continuity.

Dong, et al. (2009) developed a conceptual model that links three IT-related resources (backend integration, managerial skills, and partner support) to firm performance improvement. The study indicated significant contribution of IT to supply chains, though it has also been revealed that the technological resource alone does not hold the answer to IT value creation. In fact, managerial skills, which enable adaptations on supply chain processes and corporate strategy to accommodate the use of IT, have highlighted the strongest role in IT value creation has been concluded in the study. Furthermore, results found backend integration and managerial skills to be more valuable in more competitive environments while commodity-like resources have diminishing value under competition, integralional and managerial resources become even stronger.

Heier, Borgman and Maistry (2007) evaluated the impact of ITG software on value delivery from IT systems. The study has examined the relationship between ITG applications, ITG processes and value delivery from IT. The results of the study indicated that business value from IT appears to be assisted by implementation of ITG software. Authors have argued that organizations need to work on ITG processes as well as software to see value delivery from IT systems.

Kwon and Watts (2006) investigated the impact on firm performance of two types of IT value practices – efficiency and knowledge management and looks at the relationship to dynamism and hostility. The study found that hostility and dynamism are significantly associated with IT value. The study has also indicated associations
between IT value and organizational performance.

McKay, Marshall and Smith (2003) interviewed CIOs of six of Australia’s Top 50 companies and established a model of the value of IT. The results of the analysis indicated that planning/alignment, evaluation and benefits are linked to delivery of value from IT investments. The study has argued that these three factors can be categorized into 5 main phases (building the business case, alignment and prioritization, evaluation, system acquisition and implementation).

Tallon, Kraemer and Gurbaxani (2000) developed a process oriented model to assess the impacts of IT on critical business activities. The survey of 304 business executives worldwide revealed that corporate goals for IT can be classified into four types – unfocused, operations focus, market focus and dual focus. The results of the study indicated that strategic alignment and IT investment evaluation contributes to higher perceived levels of IT value.

Sircar, Turnbow and Bordoloi (2000) examined the relationship between firm performance and IT/corporate investments. The results of the study indicated that IT investment is an important contributor to a firm’s performance.

Ryan and Harrison (2000) interviewed 50 IT decision makers from a variety of industries and found that social costs and benefits accrue when IT resources are acquired. It has been argued in the study that these benefits are pivotal in determining IT’s effectiveness.

Gregor, et al. (2005) assessed issues associated with the circumstances and settings of ICT implementation, ICT contribution, factors which influence the value, what management practices relate to ICT benefit. The results of study appeared to suggest that achieving business value from ICT is within the organization’s control. The study concluded that this value is not significantly dependent on the organization’s industry or size.

ITGI (2005f) discussed current performance management governance approaches and conducted a survey with Lighthouse Global of 200 IT professionals from 14 countries. The results of the survey concluded that most effective method of value delivery measurement was in-house developed methods. It has been identified in the
survey that most organizations used return on investment to measure the value of IT projects and investments. It is further indicated by the results that IT department performance was generally measured for value by an in-house method or balanced scorecard approach.

Various studies exhibiting the importance the ITG domains have produced conclusive results. Researchers have evidenced positive association between ITG domains, namely, IT strategic alignment, IT resource management, IT performance management, IT risk management and IT value delivery with organizational success. The results of the studies have indicated that there is a synergistic coupling between strategic alignment and IT investment with firm performance. Studies presenting holistic view of ITG have considered structural processes, relational capabilities, culture, internal economy and strategic vision as the key to effective ITG. The results of the studies reviewed in above sub-section appeared to suggest that planning/alignment, evaluation and benefits are linked to delivery of value from IT investments. Studies state that IT investment is an important contributor to firm performance and have considered IT and system failure as the biggest source of operational risk; so for mitigating IT risks CIOs’ must take responsibility for business interconnections, regulatory compliance, and consumer demand for privacy protection. The studies exploring the current performance of ITG by determining the level of awareness and understanding of ITG mechanisms reported the importance of ITG performance measures; though organizations do lack formalized ITG processes. So, studies concluded that organizations need to work on ITG processes as well as softwares to see value delivery from IT systems which in turn will lead to success of business processes.

2.4 RATIONALE OF THE STUDY

Research on the IT, CG, ITG and FP (inter-linkages) has a long history. Researchers have built evidence that link IT and CG with FP respectively. The study provides extensive review regarding IT, CG and ITG. Based on the literature and to validate the same, prior studies have been empirically examined. This study has also framed two indices: ITDI, based on the NASSCOM IT Users Awards Criteria (NASSCOM, 2012), and Board Briefing, IT Governance Institute (ITGI, 2003) and CGDI, based
on Standard and Poor’s: S&P ESG India Index Methodology (April. 2011). Issues in IT Disclosure Index are broadly classified into 5 broad categories having 64 sub-points. No single study based on ITDI has been identified in the journey of carrying out the research. Whereas in CG Disclosure Index a total of 130 statements classified in 4 broad categories are considered. For comprehensive assessment, this study has considered five different IT dimensions to assess the impact and orientation of companies towards IT. And as far as CG index is concerned instead of considering just a single measure of governance (as some prior studies have done), this study has incorporated four different governance measures to assess the conduct of companies regarding transparency and disclosure practices. To examine the interrelationships between IT and CG with Firm performance respectively, a total of thirteen financial performance measures have been taken into account. Since no study has extensively covered IT issues for corporate governance as it relates to performance for empirical examination, this study will serve as a data base for future research.