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## **Role of Enterprise Systems in Business Transformations: A Management Perspective**

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### **Abstract**

To survive in the increasingly competitive and complex world of business, a concept that has gained extensive popularity recently is business transformation, and Information Technology (IT) is said to be a strong candidate to enable such strategic endeavours. This paper is based on a research-in-progress and attempts to look at the potential of a specialized kind of IT called 'Enterprise Systems' (which has made waves in the industry and academia in recent times) in such transformation efforts. The contribution of the paper is that it synthesizes studies in the related areas of business transformations and the strategic potential of Information Systems (including Enterprise Systems). The paper also proposes a framework depicting how the adoption of Enterprise Systems can enable firms to strategically transform themselves. The intention is to follow this up with a detailed research project to validate the framework empirically.

### **Keywords:**

Organizational transformation, Customer relationship management (CRM), Organizational strategies, Enterprise resource planning (ERP), Innovation

## **INTRODUCTION**

An increasingly competitive and ever-changing business world has forced the managers of large organizations to be in an ongoing search to strengthen their organizations on one hand and to identify weaknesses of their rivals to arrive at new opportunities on the other. These objectives have led to the concept of 'business transformation': to align people, processes and technology closely to the strategy of the organization, and to undertake innovations to derive new strategies, with a view to fulfill the organizational mission. Technology, and esp. Information Technology, has the potential to play a significant role in such endeavours.

The last two decades have witnessed the widespread adoption of a technology called 'Enterprise Systems' by large local and multinational firms and increasingly so by small to medium scale businesses. Enterprise Systems (ES) are large-scale, packaged, software systems that can be used to streamline and integrate all the business processes of a firm and improve information and knowledge levels within the firm as well as with its supply chain partners and stakeholders. In recent times, the term encompasses several systems like Enterprise Resource Planning (ERP), Customer Relationship Management (CRM) Supply Chain Management (SCM), with associated technologies like Business Intelligence. However, for our purpose of study, we restrict the use of the term 'Enterprise Systems' to Enterprise Resource Planning (ERP) and/or Customer Relationship Management (CRM) only, given their clear dominance, in both the scope of operations as well as the number of adopters, over other kinds of enterprise systems in the market. These systems have been reported to enable error reduction, faster transaction processing, access to timely, better quality information and the like for the adopting firms, when implemented successfully (Davenport 2000). Given that now the majority of Global Fortune 500

companies have such Enterprise Systems in place, we have reached a point where it seems redundant to question the credibility of Enterprise Systems as an IT platform for large organizations.

However, implementing these systems involve investments of millions of dollars and significant periods of time and effort. Now, firms expect more out of such systems than merely being an IT tool: to help them create business value, and to position themselves better in the marketplace. These expectations have led to the growth of several large, multi-national, blue chip 'Consulting' firms that claim to undertake 'business transformation' for their clients through the use of Enterprise Systems. Also, almost each of the vendors of Enterprise Systems claims to improve and equip their system to produce maximum organizational benefits and enable these systems to play a strategic role to help the adopting firms compete in the market (Seddon 2005). But in spite of the claims by vendors and consultants about adopting Enterprise Systems for transforming businesses, there is very limited literature (if any) that concentrates on the role of Enterprise Systems as an enabler of business transformations from a client organization perspective. So it is difficult to get a balanced picture of what Enterprise Systems have actually done (and can potentially continue to do) to transform the business of the adopters. Also, there's little (if any) material on the process whereby investments in Enterprise Systems lead to actualizing the strategic goals of the adopting firms or reframing their strategy, as warranted by business transformation efforts. This leads to the research question:

***How can the adoption of Enterprise (ERP and/or CRM) Systems play an effective role in IT-based transformations in large organizations? Specifically:***

- What are the things that the adoption of Enterprise Systems enable organisations to do that can assist in transforming the organisation?
- Does the adoption of Enterprise Systems enable the organization to achieve the objectives of the transformation initiatives? If so, how?
- Does the adoption of Enterprise System have a strategic impact on the organisation by realising strategic benefits for the organization ? If so, how?
- Does the adoption of Enterprise System have a strategic impact on the organisation by shaping or revising the strategies of the organization? If so, how?

The scope of the research question(s) is explained as follows. These questions are intended to be studied from the perspective of the middle or top level management of large to very large firms belonging to any type of industry (with at least annual revenue of \$500 ml or so) that have engaged in business transformations, and among other things, have made a significant investment in Enterprise Systems. The business transformation initiatives that should be studied for the research question are the ones that fulfill the following criteria: (a) geared to align the organization to its strategies and/or revise or reshape their strategy to meet the organizational mission; b) involve successful implementation /go-live of a significant part (e.g. a major release) of Enterprise Systems and post 'shakedown' period.

## **LITERATURE REVIEW**

The research question above requires understanding of a number of topics from business management and IT. First, studies of Business Transformations had to be reviewed to understand what transformations are. As is evident from these studies, business transformations are essentially strategic initiatives to survive in the contemporary cut-throat world. Second, studies on the strategic potential of Information Technology/Systems in the business world were reviewed to identify how IT/IS in general can assist in business transformations. Third, studies on the prime subject of research, Enterprise Systems, were reviewed to understand the benefits Enterprise System can provide, and the potential of Enterprise System to support the strategic endeavors of an organization. The review below attempts to summarize the key studies within these three areas and to link them in a framework that identifies the potential of Enterprise systems to support business transformation in an adopting organization.

### **Business Transformation as a Strategic Initiative**

Business or Organizational Transformation is a relatively recent term that has emerged in the last two decades or so in the business world. Transformation involves being from one state to a different state as a flow and helps the organization to be flexible and responsive to its internal and external arenas as a mix of first order and second

order changes, as identified by Watzlawick (1974) and Fletcher (1990). Gouillart (1995) defines it as the orchestrated redesign of the genetic architecture of the corporation achieved by working simultaneously, although at different speeds, along the four dimensions of Reframing (redefining the corporate vision and mission), Restructuring (achieving internal high performance), Revitalization (strategically link the corporate body with its environment) and Renewal (employee development). Business Transformation refers to a process of altering context that emerges from organizational learning and alignment of individual actions and involves continual reinvention leading to emergence of new strategy, structure, processes and practices. The concept is said to be strategic in nature, enabling an organization to ensure long-term survival and create business value by a substantial change in the markets and customers a firm caters to and the products / services it offers to them, as well as in internal aspects such as structure, systems (Parker 1996; Laszlo and Laugel 2000; Stockport 2000). Transformation can be regarded as the destruction of existing order and building a new one and that it leads to creating new forms and routines in the company and can be done in two ways : a top-down, value oriented, strong approach or a more relaxed and bottom up approach (Beer and Nohria 2000; Lounsbury 2002). Amis et al. (2004) researched 36 organizations and showed that transformations, even if are radical in nature, are successful with initial bursts of change with relatively sedate progress later (pace) high impact decisions being made earlier (sequence) and the process is iterative in nature (non-linearity). Thus a continual nature of transformations is being stressed upon. Beck (2005) introduces the term 'Robust Transformation' as a deliberately transient, episodic response to a new yet fluid environmental condition. It is evident that almost each of the studies on business transformation suggests that the concept has its roots in strategic analysis and actions and that transformation is essentially a strategic endeavour. Another concept that goes hand-in hand with transformation is 'Innovation', as originally defined by Drucker (1985) as 'a set of tools that can be learnt and practice to create new business'. This is an activity that adds unique value for the customers, enables competitive advantage and generates value for shareholders (Snyder and Duarte 2003). Again, the dimensions along which an organization can undertake innovation are product, process and marketing, as stated by Williams (1999), Govindarajan and Trimble (2005), Andriopolulos and Dawson (2009), O'Sullivan and Dooley (2009).

### **Strategic Potential of Information Systems**

Information Technology has been touted to play a 'strategic' role in the internal and external environment of the contemporary corporate world for sometime now. To provide a strong base to understand the 'strategic' potential of IT, a brief look at the concept of 'strategy' and the key, well-known theories on it is necessary. Ansoff (1965) define Organizational Strategy to be "a systematic approach.... to position and relate the firm to its environment in a way which will assure its continued success and make it secure from surprises". For decades now, most studies/theories on organizational strategy can be primarily placed in one of the two categories: a) those looking at the internal strengths and weaknesses of the firm ,i.e., internal factors and b)those looking at the external opportunities and threats ,i.e., external factors There are several well known theories like The Industry and Competitive Analysis and The value Chain by Michael Porter , Resource-Based Theory (Barney 1990), Capability-Building Theory (Amit and Schoemaker 1993; Saloner et al. 2001; Hamel and Prahalad 2005), Emergent strategy (Mintzberg and Waters 1985), Business value creation (Ghemawat and Rivkin 2006). However, the theory of capability-building is the closest to explaining the strategic potential of IT /IS. A 'strategic capability' is defined as mix of complementary skills and knowledge bases, management systems, routines and policies, specialised investments, organisational culture embedded in a syndicate that leads to the ability to execute critical processes to a higher standard than most rivals (Coyne et al. 1997 and Dow 2009). This view of strategy is explored in the context of Enterprise Systems in this proposed research.

Having looked at the different approaches to strategy studies in general, a review of the studies on the 'strategic' role of IT to identify its potential in business transformation follows. In the work of Gouillart (1995) on business transformation along the 4 dimensions mentioned before, Information Technology plays a key role in 'Restructuring' and 'Revitalization' constructs. The Industry and Competitive Analysis and Value Chain Frameworks by Michael Porter have been used to explain what role Information Systems can play to provide competitive advantage (Applegate et al. 1996). An approach towards strategic business transformation produced a Questions Framework to assess the role of IT in the transformation process. These questions were: What business are we in? What are the problems, forces and success factors? What is our strategy? How can we add business value? How can we improve our business strategy? How can we best organize to achieve the goals? What action plan supports the aforesaid questions (Parker 1996). As an extension to the resource based theory by Barney (2001) on competitive advantage, a framework developed by Feeny and Ives (1997) proposed that there are three things that need to be taken into account to determine if Information Technology can lead to sustained competitive edge - the time lag before it can be imitated, the rivals who can afford to imitate it and whether it would be any worth imitating the first mover. The Internet was subjected to the Frameworks on Strategy by Porter to study its role in the competitive market (Porter 2001). Critiquing the resource based approach of competitive edge, a process oriented approach was preferred by Lorino (2002), wherein capabilities,

not resources by themselves, are found to lead to competitive advantage. This approach seems to be quite applicable to discuss the strategic role of Information Systems (and Enterprise Systems) in adopters. The Strategic Grid Framework was devised by Warren McFarlan to identify 4 roles that IT plays in organizations: assist auxiliary support to running the firm, support core processes of the firm, support strategy of the firm, and lastly innovate and use increasingly for strategic goals. In addition, a concrete list of questions were designed to assess the role of IT to gain business advantage in the market : Can IT a) change the basis of market dynamics b) change the relationships with buyers and sellers, c) build or decrease barriers to entry, d) affect switching costs e) add value to existing products and services ? (Applegate et al. 2003).

The inclusion of IT/ IS into the core business framework and incorporating IT leadership roles into the very top management of the organization has been repeatedly emphasized upon by various studies (Martin et al. 1995; Byrd 2006). Substantial attempts have been made by organizations to formalize Strategic planning for Information Systems and associate it with the business strategic planning (Earl 1993; Lederer and Sethi 1996; Robson 1997; Kearns and Lederer 2000). There have been strong recommendations to align the goals of Information Systems with the goals of the business (Zviran 1990; Parker 1996; Kearns and Lederer 2000; Swanson 2005). On the other hand, exploitation of IS capabilities to play a role in formulating business strategies was found to be useful (Goldsmith 1991; Earl 1993; Robson 1997). Kearns and Lederer (2000) summarize the above studies and propose a useful model of interaction of Information Systems Planning (ISP) and Business Strategy/Planning (BP). It uses two constructs: business aligning, i.e., using IS to realize the business plan, and business impacting ,i.e., utilizing IS capabilities to create business strategy.

### **Enterprise Systems: Realizing Business Benefits and Strategic Potential**

Enterprise Systems, a specialized kind of packaged, integrated and enterprise-wide Information Systems, have been in the limelight for industry and academia alike for the last few years. Botta-Genoulaz et al. (2005) did a useful review of literature in the area of Enterprise Systems and classified the research into broad categories like implementation of ERP, Optimization of ERP, management through ERP, the ERP software and the like. A vast majority of Enterprise System related studies mainly concentrate on the critical success factors of Enterprise System projects or how to successfully 'go-live'. Well-prepared Project Schedule, top level management support, internal cooperation, right degree of change, having a project champion and breaking up a large project into smaller manageable chunks combined with balanced relationship with implementation consultants are some of the key ingredients for Enterprise System project success (Holland and Light 1999; Laughlin 1999; Parr and Shanks 2000; Robey, Ross and Boudreau 2002). This study to be conducted, however, focuses on realizing organizational benefits and the potential of Enterprise Systems in strategic initiatives like business transformations. Therefore, a detailed discussion of the success factors of an Enterprise Systems 'project' does not seem to be of much relevance. Instead, researches on the capabilities from Enterprise Systems that have led to organizational benefits are being reviewed in detail.

Availability of good quality information in real time is identified to be a key product of ERP systems by several studies in several countries (Davenport 2000; Spathis and Constantinides 2003; Botta-Genoulaz and Millet 2005; Rikhardsson and Krammergaard 2006; Harley and Wright 2006). This capability has led, or potentially can lead to better decision making and strategic initiatives by the management of the studied firms. Optimisation of business processes and getting them streamlined is enabled by Enterprise Systems in the adopting firms (Davenport 2000; Al-Mashari 2003; Spathis and Constantinides 2003 ; Siau and Messersmith 2003; Botta-Genoulaz and Millet 2005; Chand et al. 2005; Rikhardsson and Krammergaard 2006). This has contributed, or can do so, to better inventory management (and lower stock-in hand) and a significant dip in the costs in these firms. Having an integrated framework of data and business processes across the organization, and possibly beyond it, is yet another dream fulfilled by ERP systems in adopting firms (Davenport 2000; Al-Mashari 2003; Grant 2003; Spathis and Constantinides 2003; Utecht & Hayes 2004; Volkoff et al. 2005; Karimi et al. 2007). This has enforced, or can enforce a standard structure and contributed to globalization and expansion of organizations. Improved customer satisfaction and retention is identified as a key benefit derived direct out of Enterprise Systems, as discovered by several studies (Davenport 2000; Murphy and Simon 2002; Chand et al. 2005). Several large world-famous organizations have adopted ERP systems and benefitted significantly from the operational efficiency it provides. Microsoft implemented SAP ERP and gained significant operational benefits like reduction of planning cycle (by 95%), low stock levels (up to 25%) saved 18 Million USD. Nestle adopted SAP ERP to have common processes and structures across the firm which in turn produced significant operational benefits like decreased inventory and distribution expenses leading to significant increase in return on investment (ROI). The US army adopted ERP to synchronize institutional (acquisition, finance, HR, logistics) and operational army (war fighting, enterprise information mission area) with attainment of the goal of "one army one enterprise" in mind (Motiwalla and Thomson 2009).

Speaking of benefits realization from Enterprise Systems, two studies that have had a significant contribution to the proposed research are discussed here. First, As a consolidation of prior literature and additional contextual interviews on the benefits of Enterprise Systems, Shang and Seddon (2002) developed a useful Classification System of the benefits derived from Enterprise Systems and classified them into 5 categories: Operational, Managerial, Strategic, Organizational and IT Infrastructural benefits. This framework has been used with modifications to certain components to develop a long- term benefit realization framework for the purpose of our research. Another significant addition to the literature is a model by Davenport et al. (2004), which identifies the primary drivers of organizational benefits from Enterprise Systems as being 'informate', 'integrate' and 'optimize'. This well summarizes the things that Enterprise Systems enable organizations with. This model, however, does not refer to the strategic impact of such systems to adopters in the long run. This is used as the backbone structure to develop the forthcoming framework for this research.

Enterprise Systems have been promising to deliver strategic benefits to adopting organizations in recent times. A research on the use of Enterprise Systems after implementation using a stage maturity model concluded that adopting organizations ultimately aim to use ERP for strategic purposes (Holland and Light 2001). Willis and Brown (2002) propose that after implementing Enterprise Systems, firms should continuously strive to extend the system and integrate it with others and better reengineer the processes. This was complemented by another study which concluded that an alignment of the Enterprise Systems with the Business Strategy was a key ingredient to realize the strategic goals of the adopting firm (Grant 2003).

Several case studies done on large organizations like Kodak, Bay Network, Airbus revealed that they had implemented ERP Systems to realize their strategies like gaining better market share and going global in mind (Al-Mashari 2003). A case revealed that implementing the same ERP package at the headquarters and a branch led to strategic benefits in the market (Utecht and Hayes 2004). CRM systems have been said to have strong strategic potential for increasing market share by using them to manage customers through better promotion of products/services, better customer service, better product/service designs and better profitable customer identification (Bligh and Turk 2004). A study by Accenture claimed that a 10% improvement in customer service and better customer analysis increases profits by \$ 50 million in \$1 billion firms, with up to 60% of variances in return on sales attributable to CRM. Another study by Bain & Co. claimed that a 5% improvement in customer retention increase profits by 45% to 95% in firms (Buttle 2004). Improved customer satisfaction, increased customer base and improved market value were found to be the key strategic benefits out of an Enterprise Systems implementation in a large manufacturing firm (Chand et al. 2005). Research done with information from a survey of 400 plus organizations provides empirical evidence from large firms that adoption of CRM systems cause an increase in effectiveness of one to one marketing leading to a growth in market share (Mathis et al. 2006). Research has been carried out on large firms in the US adopting Enterprise Systems to reveal that knowledge management derived from ERP systems can help firms achieve competitive advantage with lower cost, product flexibility, volume flexibility and the like (Ling and Zhao 2006). ERP systems were considered instrumental in assisting integration in post-merger phase of organizations, thus helping inorganic growth of companies (Grainger 2007). CRM systems were considered to be used for strategic business purposes along three dimensions: business, technology and customer (Teo et al. 2006). Several world-famous multinational firms have implemented ERPs as a means to execute their business strategy. UPS, the parcel delivery giant, implemented Oracle Enterprise Systems for two key strategic reasons: a) to support the integration of its acquisition of 30 plus firms and their different information systems. b) to provide a range of services to customers in addition to transportation of goods, including tracking deliveries as a means of product/service differentiation. Wipro Consulting adopted ERP to improve employee and manager service by Human Resource self service to meet the strategic objective of expanding consulting services by better retention of their strategic resources ,i.e., employees. Wipro achieved this with increased access to information and lower administration costs and by aligning the HR strategy top the overall strategy (Motiwalla and Thomson 2009).

From above, we can conclude that experts have suggested that strategic business transformations are essential to survive in the contemporary world and have also acknowledged the strategic potential of IT. On the other hand, the chosen IT platform for the current business landscape has arguably become Enterprise Systems. However, we find a gap in empirical research assessing the role of this widely popular kind of IT in business transformation and its strategic impact: the motivation for this proposed research.

## **PROPOSED FRAMEWORK**

The framework is proposed to explain the role of Enterprise Systems in business transformation. In proposing this framework, it is acknowledged that there can be initiatives other than the adoption of Enterprise Systems that can play significant roles in a business transformation (such as employee development and rewards restructuring,

organizational culture). These are considered to be outside the scope of the study. The process described in the framework can be said to begin with a clearly defined corporate/ business strategy for an organization. The strategy drives (among other things) the adoption of Enterprise Systems.

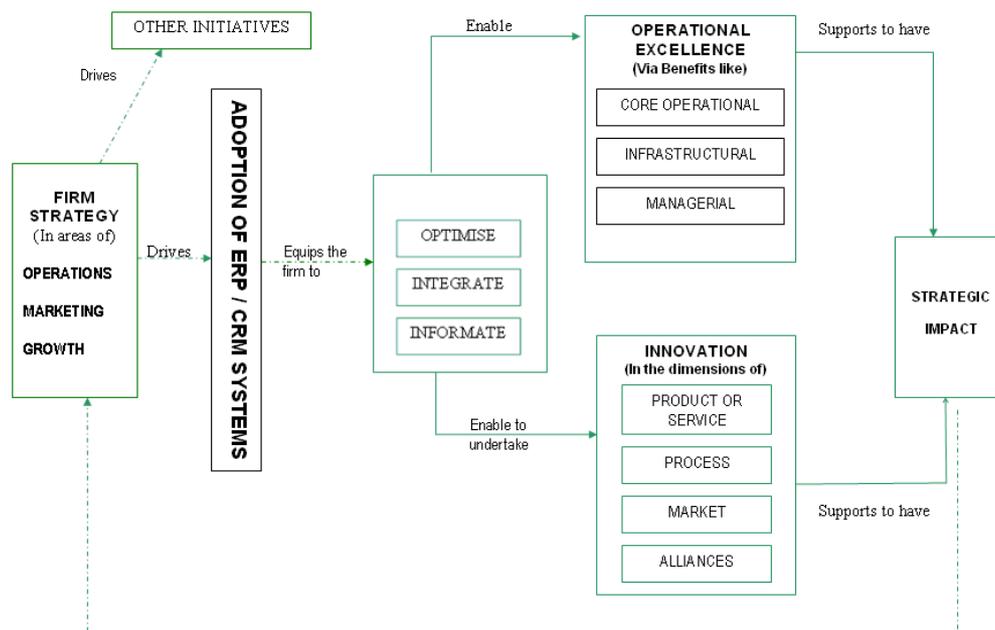


Figure1. Enterprise Systems-enabled Business Transformation

The adoption of Enterprise Systems, upon successful ‘go-live’, post- shakedown period, has been shown to enable a firm to:

- **Integrate:** harmonize the data and processes (both the business logic and user interface) within the organization as well as beyond the boundaries, extending to customers, suppliers and other stakeholders
- **Optimize:** standardize the processes by aligning them with best practices or modify/ enhance processes to meet the strategic needs of the organizations that yield competitive advantage
- **Informate:** provide access to real time data and the capability to analyse the internal organizational performance and the behaviour of external stakeholders like customers and suppliers; and aid decision making at different levels of management including at corporate/ business strategic levels.

TheSe constructs were originally suggested by Davenport et al.(2004) and empirically tested with a large number of firms, as mentioned in the literature review. The model seems to well summarize what Enterprise Systems can enable a firm to do. These can be achieved in the organization after initial implementation, enhancements, additional components, upgrades and the like. This leads to the development of the hypothesis as below:

Next, Optimize, Integrate and Informate are shown to enable business transformation as a continuous process, along one or both of the two paths: a) operational excellence b) innovation.

### Operational excellence enabled by adopting Enterprise Systems

The top half of the framework shows that Enterprise Systems enables the adopting organization to Optimise, Integrate, Informate and this leads to operational excellence in the organization. Operational excellence is achieved by organizations via benefits that fall in one or more of the following types:

- **Core Operational Benefits:** benefits such as Cycle Time Reduction, Cost Reduction, Improved Quality, Customer satisfaction and retention, lower inventory levels
- **Infrastructural Benefits.:** benefits such as IT infrastructural costs reduction, data error reduction, flexible IT infrastructure
- **Managerial Benefits:** better control over operating processes and therefore making better decisions for greater operating efficiency. These by themselves are *not* strategic benefits for the firm

These categories of benefits bear almost the same notion as the Operational, IT Infrastructural and Managerial Benefits respectively in the work done by Shang and Seddon (2002) on classification of benefits from Enterprise Systems, as mentioned in the literature review.

It can be argued that Optimise, Integrate, Informate as discussed earlier enable the operational benefits below. For instance, better streamlined business processes, i.e., **Optimise** remove bottlenecks and improve operations which lead to reduction of time in carrying out processes, reduction in costs of inventory and administrative expenses like printing and reduction of errors (Davenport 2000; Al-Mashari 2003; Spathis and Constantinides 2003; Siau and Messersmith 2003; Botta-Genoulaz and Millet 2005; Chand et al. 2005; Rikhardsson and Krammergaard 2006). Again, getting timely credible information, i.e., **Informate** helps in getting overall process view across functional areas and enables better allocation of resources by the operational managers. (Davenport 2000; Spathis and Constantinides 2003; Botta-Genoulaz and Millet 2005; Rikhardsson and Krammergaard 2006; Harley and Wright 2006) Also, having one set of common data, i.e., **Integrate** reduces time for data entry and retrieval and costs associated for joining different legacy systems to get information, thus allocating resources for the 'real' business processes and thus increasing productivity (Davenport 2000; Al-Mashari 2003; Grant 2003; Spathis and Constantinides 2003; Utecht & Hayes 2004; Volkoff et al. 2005; Karimi et al. 2007).

### **Innovation enabled by adopting Enterprise Systems**

The bottom part of the framework attempts to address how the adoption of Enterprise Systems can enable 'innovation' to carry out business transformation. Innovation is something that adds unique value for the customers, enables competitive advantage and generates value for shareholders (Snyder and Duarte 2003). The adoption of Enterprise Systems enables the firm to innovate along the following dimensions:

- **Product/Service:** Can be accomplished by introducing a new Product/Service or revamping an existing product/service by a) using information and analytics gained from ERP/CRM Systems, i.e., by **Informate** (b) integrating the organization with the partners of its value chain, backward or forward using ERP based EAI tools, i.e., by **Integrate**.
- **Process:** Can be accomplished by creating new processes /completely redesigning existing processes, i.e., by **Optimize**. This can be in the following arenas a) operational/back-end processes by using the best practices of the Reference Models in such ERP Systems, (b) front-end/customer-service processes by the use of marketing-sales-service cycle of CRM systems.
- **Market:** Can be done by (a) Market penetration, i.e., selling more of existing products/services to existing customers by the use of the customer analytics capabilities of CRM systems, i.e., by **Informate** (b) Market development, i.e., selling existing products/services to new/prospective customers or market retention in times of threats by rivals/ new entrants by improved marketing processes like campaign management etc using CRM systems, i.e., **Optimize**.
- **Alliances:** Can be done by the means of mergers, acquisitions, consolidations, joint ventures for strategic purposes enabled by integration of data and process frameworks enabled by ERP between the acquirer and the acquired, i.e., by **Integrate**

As discussed in the literature review, Studies in business management have proposed the dimensions along which an organization can undertake innovation as product, process and marketing, stated by Williams (1999), Govindarajan and Trimble (2005), Andriopolulos and Dawson (2009), O'Sullivan and Dooley (2009). This framework adds the construct of 'Alliances' as a dimension of innovation, and explores all of the aforementioned dimensions in the distinct context of Enterprise Systems.

### **Strategic Impact of Enterprise Systems adoption: Realizing Strategic Benefits and/or Shaping Strategy**

This framework next proposes that the adoption of Enterprise Systems eventually has strategic impact on the adopter via attaining Operational Benefits and/or Innovation. This Strategic impact could be in one or both of two forms:

**Realising Strategic Benefits:** Strategic Benefits refer to the benefits that enable the firm to be in a position to compete better and grow as a firm, thus achieving the objectives of the transformation. For the purpose of our research they are: price leadership, product/ service differentiation, increase in market share, expansion/globalization and inorganic growth (through takeovers, mergers, partnerships etc). For example, a trading firm with a price leadership strategy may adopt Enterprise Systems (say ERP). They could take advantage of the integration of data and processes, i.e., 'Integrate' and enhance and streamline the processes, i.e., 'Optimise' using the ERP system to reduce the costs of doing business. These could result in: decrease in stock

levels and cycle times which are 'Core Operational Benefits'; and faster transaction processing i.e. 'Infrastructural Benefits.' It is also possible to create or fully redesign a process, i.e., undertake 'Process Innovation' by complex configuration settings with the built-in Enterprise Systems Best Practices. Such a configured/tailored process would be hard to copy by rivals and thus yields efficiency, thus decreasing costs much below the industry average. If these costs are significantly reduced, the firm can charge lower prices for their products and thus attain the 'Strategic Benefit' of price leadership in the market. As another illustration, a firm with a strategy of product/ service differentiation, could use the Information and analytical tools of Enterprise Systems (say CRM), i.e., 'Informate' for analyzing the real requirements of prospective and existing customers and create a novel product/ service, i.e. undertake 'Innovation'. This would enable them to charge a higher premium and even expand their customer base, leading to increase in the revenues and market share. Also, seeking what segments of customers are most profitable assisted by such analytical capability will help the organization to retain its most 'precious' customers in times of threats by rivals. Another approach is that integrated data and processes of the system would be a real boon in merger and acquisition of firms, i.e., Alliance Innovation to increase market share, provided any or both the acquirer and the acquired had Enterprise Systems in place. Several organizations that have adopted such systems have achieved better market value, inorganic growth through mergers, management of key resources etc as found from evidences in prior studies, as discussed in the literature review (Holland and Light 2001 Al-Mashari 2003; Chand et al. 2005; Mathis et al. 2006; Motiwalla and Thomson 2009). This framework attempts formalizes this concept as a construct , thus identifying the strategic impact of Enterprise Systems.

**Shaping/Reshaping strategy enabled by Enterprise Systems:** Strategy is dynamic in nature and developing new strategy is often a key exercise in business transformation. The framework also suggests that the adoption of Enterprise Systems also support reconsideration, reframing or modifications of the existing business strategy. This point can be illustrated as follows. The adoption of Enterprise Systems enable shaping of strategy by the ability to: determine profit drivers , grouped by business units, to come up with a new corporate strategy; leverage a base platform with built-in processes for multi-country accounting and reporting to frame growth strategy by going global; Shifting to a low-price strategy enabled by dramatic improvement in process efficiency; leverage an integrated data and process framework to grow by merger and acquisitions; shift to product/ service differentiation strategy by creating new Product/ Service; and so on. In the above cases, we see that shaping/revising the strategy often happens through operational efficiency and/or innovation enabled by adopting Enterprise Systems. Specialized tools for strategic management activities are also provided within ERP systems, like SAP's Business Planning and Simulation (BPS), Corporate Performance Monitoring (CPM), Business Consolidation (BCS) and the like which incorporate both optimising the strategic management process and providing information for strategic analysis. Since Information Technology has long been proposed to play a role in shaping/framing the corporate/ business strategy (Goldsmith 1991; Earl 1993; Parker 1996; Robson 1997; Kearns and Lederer 2000), this framework attempts to identify the role of Enterprise Systems as a particular form of information technology in shaping the corporate/ business strategy with Enterprise Systems-enabled innovation as the driver.

The framework proposes that an organization can be transformed enabled by the adoption of Enterprise Systems along one or more of the pathways mentioned as discussed above. In summary, the framework proposes the different possibilities organizations can avail by adopting Enterprise Systems to transform themselves, with a goal to better execute their existing strategy or reshape their strategies for success. The model is based on literature and logic and the intention is to validate this model empirically by conducting a detailed research project in the future.

## **EXPECTED CONTRIBUTIONS OF THE PROPOSED STUDY**

Results of this study will be of considerable importance to the management of large organizations who have adopted or planning to adopt Enterprise Systems to understand how they can 'transform' their business by investing in Enterprise Systems. It would also be of interest to academics in the area of Management and Information Systems to validate the claimed potential of Enterprise Systems for strategic business transformations. In particular the expected contributions can be listed as follows:

- Provide a new theoretical framework on how firms can successfully undertake strategic business transformations along different pathways, enabled by the adoption of Enterprise Systems
- Provide additional evidence of whether the adoption of Enterprise Systems enable firms with the following: 'optimise', 'informate', 'integrate'
- Provide additional evidence of whether the adoption of Enterprise Systems leads to operational excellence in firms
- Provide evidence of whether the adoption of Enterprise Systems leads to Innovation in the adopting firm, along one or more of the four dimensions mentioned in the framework.
- Provide evidence of the strategic impact of the adoption of Enterprise Systems: whether the adoption assists in the attainment of the strategic benefits and/or assists in revising or shaping of the strategy of the firm

To the best of our knowledge, there has been no other study that studied the same phenomenon as mentioned in the above section and, given the importance of the area to both academia and industry, it would be worth attempting to explore the proposed question.

## CONCLUSION

The paper discusses a topic of high level of interest: the contemporary concept of business transformation and the potential of a specialized technology in enabling it in organizations. It proposed a framework to address the research questions relating to how Enterprise Systems can play an effective role in IT-enabled Business Transformation. This is a research in progress and is expected to be followed up with a detailed study. As with previous researches conducted in similar areas, it seems rational to follow a combination of quantitative and qualitative techniques. The study can be undertaken with the help of three components using organizations that have adopted ERP/CRM for business transformation. The components are: (a) Primary detailed case studies of 3 to 5 organizations that have adopted ERP/CRM for business transformation with interviews (b) Survey-like study of 100+ organizations (from secondary data) by seeking evidence of and scoring the constructs of the framework in each of the cases (c) Secondary detailed extensive case studies of a few organizations that have adopted ERP/CRM for business transformation. This combination of primary case studies and survey-like study will help to substantiate a) detailed clarity of the dynamics behind the phenomenon explained by the framework as well as b) its reasonable applicability to a number of cases in the industry.

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