Chapter 2
Literature Review

This chapter presents a review of literature related to the current research. In order to provide background information and justification for the research framework, the first section begins with an overview and discussion of business models. In this section, definition, configuration, approaches towards constructing a generic business model framework are presented followed by a discussion of contextual factors influencing the development and use of business models.

The second part discussed critical success factors, their essentiality and methods on how critical success factors are identified. Next we discuss business performance measurement systems from the performance measurement literature and then the chapter moves towards selection of a business performance measure.

A discussion of resource based theory is also provided to support the relationship between organizational learning and organization performance. Subsequently, the chapter continues with a discussion and recommendations related to study of organizational performance. The chapter ends with a brief summary of the research model.

2.1. Business Models

2.1.1. Background

The first systematic and comparative account of growth and change in the modern industrial corporation was presented by Alfred Chandler in his seminal Strategy and Structure (Chandler, 1962). He showed challenges of diversity implicit in a strategy of growth called for imaginative responses in administration of the enterprise. In his subsequent work, Chandler (1990) also showed how scale and scope economies provided new growth opportunities for the enterprise during the second industrial revolution. Chandler (1990) research question in part is as follows, ‘It then becomes critical to explain how and why the institution [of the modern industrial firm] grew by adding new units—units that carried out different economic functions, operated in different geographical regions, and handled different lines of products.’ Later in the
volume, he includes the introduction of new products, based on internal research and technology, as part of this definition.

The ideas from Strategy and Structure was built upon and applied to emerging concepts of corporate strategy by Ansoff (1965). Strategy came to be seen as a conscious plan to align the firm with opportunities and threats posed by its environment. Andrews (1987) was one of the first theorists to differentiate between a business strategy and a corporate strategy. He held the former to be ‘the product-market choices made by division or product line management in a diversified company’ and that corporate strategy was a superset of business strategy. Like business strategy, corporate strategy defines products and markets— and determines the company’s course into the almost indefinite future. He also indicates that a company will have only one corporate strategy but may incorporate several business strategies into it. Thus, a firm’s current businesses influenced its choice of likely future businesses as well.

While the notion of strategy was subsequently developed in different directions, one branch of its development was to research into how managers could leverage the resources of the organization beyond that organization’s current business. Early work started from a cognitive model of rational calculation and full information. Teece (1982) built a framework where a firm’s underutilized resources, combined with imperfections in the markets, conferred advantage for diversification moves to the organization. Empirical evidence has shown how a firm’s technological position helped it enter nearby business areas, because experience in ‘related’ technologies reduced the costs of entering into adjacent areas (Teece et al., 1993; Silverman, 1999). Mintzberg (1994) identified the ‘emergent’ character of many successful strategies, and emphasized the importance of adaptation over planning while Burgelman (1983) developed a process model for how a firm can enact strategic change based on managing limited information.

A later branch of the strategy literature incorporated cognitive bias into the idea of strategy. Prahalad and Bettis (1986) introduced the notion of a dominant logic: a set of heuristic rules, norms and beliefs that managers create to guide their actions. This logic usefully focuses managers’ attention, as they seek new opportunities for the firm. Empirical examples of this path-dependent behaviour can be found in
semiconductor equipment (Henderson and Clark, 1990), disk drives (Christensen, 1997) and typesetting (Tripsas, 1997). Some scholars conclude that firms may indeed develop the ability to manage new technological opportunities effectively if they invest in integrative capabilities (Henderson, 1994), ambidextrous internal processes (Tushman and O'Reilly, 1997) or complementary assets (Tripsas, 1997). Other scholars believe that the firm must avoid internal resource allocation processes, and manage disruptive technologies outside the main business (e.g. Christensen, 1997).

Chesbrough & Rosenbloom (2002), contribute to this literature by offering the business model as a construct that can inform these earlier perspectives. He indicates that the business model provides a coherent framework that takes various organizational characteristics and potentials as inputs, and converts them through customers and markets into economic outputs. So, the business model is thus conceived as a focusing device that mediates between technology development and economic value creation. They also indicate that the failure of firms to manage effectively in the face of technological change can be understood as the difficulty these firms have in perceiving and then enacting new business models, when technological change requires it. They also argue that firms need to understand the cognitive role of the business model, in order to commercialize technology in ways that will allow firms to capture value from their technology investments, when opportunities presented by its technologies do not fit well with the firm's current business model.

Chesbrough & Rosenbloom (2002) contrast the concept of business model to that of strategy by identifying the following three differences:

- **Creating value vs. capturing value** – the business model focus is on value creation. While the business model also addresses how that value will be captured by the firm, strategy goes further by focusing on building a sustainable competitive advantage.

- **Business value** – the business model is an architecture for creating an economic value for the business.

- **Assumed knowledge levels** – the business model assumes a limited environmental knowledge, whereas strategy depends on a more complex analysis that requires more certainty in the knowledge of the environment.
2.1.2. Definition and Application

For a systematic study of business models, we need to define business models and distinguish their different types. But before digging into the definitions of the expression business model, according to Osterwalder et al., (2005) both business and model, by themselves have a specific meaning. They interpret the world model as "a simplified description and representation of a complex entity or process". Representation implying conceptualization, which is described as "the objects, concepts and other entities that are assumed to exist in some area of interest and their inter-relationship according to Genesereth and Nilsson (1987). Putting both these elements together Osterwalder et al., (2005) propose that the reflection on the business model concept must go in the following direction:

“A business model is a conceptual tool containing a set of objects, concepts and their relationships with the objective to express the business logic of a specific firm. Therefore we must consider which concepts and relationships allow a simplified description and representation of what value is provided to customers, how this is done and with which financial consequences.”

In their opinion, the above definition is sufficiently broad to embrace the different reflections on business models that have sprung up in different fields such as e-business, IS, computer science, strategy or management (Pateli and Giaglis, 2003).

A review of the literature using the term business model shows that there exists a continuum between authors using the term to simply refer to the way a company does business Galper (2001), Gebauer and Ginsburg (2003) and authors that emphasize the model aspect Gordijn (2002). These two viewpoints differ because the former generically refers to the way a company does business; whereas the latter refers to a conceptualization of the way a company does business in order to reduce complexity to an understandable level. In other words, for business models, the quest is to identify the elements and relationships that describe the business a company does. Thus, the business model concept can best be understood as a conceptual view of a particular aspect of a specific company.

According to Magretta (2003) a business model in essence, is a theory that is continually being tested in the marketplace. Grasl (2008) defines a business model as
a set of assumptions about how an organization will perform by creating value for all the players on whom it depends, not just its customers.

According to Amit & Zott (2001) in their search for wealth creation, one of the main challenges of entrepreneurs/organizations is the identification or creation of wealth producing opportunities, and the ways to profitably capture these opportunities in an uncertain environment. To do so, entrepreneurs/organizations design a business model, namely the ways their new business is going to transact with, and relate to suppliers, customers, and partners. They view the business model as depicting "the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities." The above indicated authors along with Magretta (2002), Ghaziani and Ventresca (2002) recognize business model design as a crucial task for entrepreneurs.

Malone et al., (2006) offer an operational definition, based on two fundamental dimensions of what a business does. The first dimension considers what types of rights are being sold, arrived at after classifying a business as Creator, Distributor, Landlord, or Broker. The second dimension considers what type of assets is involved. In this case, they distinguish among four important asset types: physical, financial, intangible, and human. According to them a combination of the indicated two dimensions leads to sixteen detailed business models.

Timmers (1998) defines a business model as including an architecture for the product, service, and information flows, a description of the benefits for the business actors involved, and a description of the sources of revenue.

Tapscott, et al., (2000) focus on the system of suppliers, distributors, commerce service providers, infrastructure providers, and customers, labelling this system the business web or "b-web." They differentiate business webs along two dimensions: control (from self-control to hierarchical) and value integration (from high to low).

Weill and Vitale (2001) include "roles and relationships among a firm's customers, allies, and suppliers, major flows of product, information, and money, and major benefits to participants" in their definition of a business model. They describe eight atomic e-business models, each of which can be implemented as a pure e-business model or combined to create a hybrid model.
Rappa (2003) defines a business model as “the method of doing business by which a firm can sustain itself” and notes that the business model is clear about how a firm generates revenues and where it is positioned in the value chain.

Other definitions of business models emphasize the connections a business model provides between technical potential and the realization of economic value (Chesbrough and Rosenbloom, 2002), the design of the transactions of a firm in creating value (Amit and Zott, 2001), the blend of the value stream for buyers and partners, the revenue stream, and the logical stream (the design of the supply chain) (Mahadevan, 2000), and the firm’s core logic for creating value (Linder and Cantrell, 2000). In an attempt to integrate these definitions, Osterwalder, et al., (2002) proposes an e-business framework with four pillars: the products and services a firm offers, the infrastructure and network of partners, the customer relationship capital, and the financial aspects.

Common to all of these definitions of business and e-business models is an emphasis on how a firm makes money. Magretta (2002) argues that the strength of a business model is that it tells a story about the business, focusing attention on how pieces of the business fit together—with the strategy describing how the firm differentiates itself and deals with competition. The idea of business model is also consistent with the work on interdependencies (Levinthal, 1997).

In summary, the definitions for business models range from generic (Magretta, 2002; Petrovic et al., 2001) to more concrete ones (Timmers, 1998; Weill & Vitale, 2001; Osterwalder & Pigneur, 2002). Thus, we can find definitions that explain what the purpose of a business model is, while other definitions focus on specifying its primary elements, and possibly their interrelationships.

Considering and amalgamating the various definitions for business models in the literature, this study defines it as:

“A business model is an essential conceptual structure that contains a set of elements (critical success factors) and their relationships that allows expressing an organization's unique strengths required to attain business success.”
It is also a description of the value an organization offers to its stakeholders, its network of partners for creating, marketing and delivering this value, the inherent architecture of the firm and the relationships between these that affect the organization's business performance or success.

2.1.3. Generic Business Model – Life Sciences BPO Industry

As explained in Chapter 1, affordable information technology innovation and advancement specially in the internet domain has triggered the phenomenon of organizations attaining business competitiveness through outsourcing. Due to this phenomenon of outsourcing business processes, triggered by advances in information technology advancements there has been an increase in the possible business configurations a company can adopt because of the reduced coordination and transaction costs (Williamson, 1975).

In other words, organizations can increasingly work in partnerships, offer joint value propositions, build-up multi-channel and multi-owned distribution networks and profit from diversified and shared revenue streams. The downside of this is that a company's business has more stakeholders, becomes more complex and is harder to understand and communicate. If this assumption is true one can argue that the existing management concepts and tools may not be sufficient anymore and that new ones have to be found. For example, Rentmeister and Klein (2003) call for new modelling methods in the domain of business models. Effectively, a whole range of authors propose using the relatively new concept of business models for managing companies in this new business era (Chesbrough and Rosenbloom, 2000; Afuah and Tucci, 2001; Applegate, 2001; Pateli and Giaglis, 2003).

This research study is part of this new research stream on business models and focuses on a specific area not covered so well until now: specifying, conceptualizing business models, understanding the effect of business models on business performance. Most business model research stays at a non-conceptual, broad and sometimes even vague level and hence this work tries to dig into the details and define a generic model to describe business models and their effect on business performance / success. This approach becomes indispensable if one wants to provide
effective business model framework to improve, manage business performance/success in a rapidly moving, complex and uncertain business environment of the Life Sciences BPO industry domain.

Based on the above, for the creation of a generic business model or framework which would define the elements and their relationship affecting business performance of the Indian Life Sciences BPO Industry, the work of Ushold and King (1996) was referred to and adapted. In the general the outline for the process was:

- Identification of the key elements (constructs or elemental critical success factors) and their relationships in the domain of interest (i.e. scoping the domain of business models)
- Production of precise unambiguous text definitions for such elements, concepts and or relationships
- Identification of terms and themes to refer to such concepts and or relationships
- Agreeing on all of the above

A partial outcome of this research is a generic business model framework specific to the Life Sciences BPO industry that shall ideally represent the foundation for new management tools in business performance assessment and business strategy.

2.1.4. Business Model Constructs

Constructs or elements or concepts or critical success factors form the vocabulary of a domain. They constitute a conceptualization used to describe problems within a domain. A model is a set of propositions or statements expressing relationships among constructs. Models represent situations as problem and solution statements whereas a method is a set of steps (guidelines) used to perform a particular task.

Methods are based on a set of underlying constructs (elements) and a representation (model) of their relationships in a particular domain.

March and Smith (1995) identify “build” and “evaluate” as the two main issues in constructing a model. Build refers to the construction of constructs, models and
methods demonstrating that they can be constructed. Evaluate refers to the development of criteria and the assessment of the output's performance against those criteria. Parallel to these two research activities March and Smith add the natural and social science couple, which are theorize and justify. This refers to the construction of theories that explain how or why something happens. Justify refers to theory proving and requires the gathering of scientific evidence that supports or refutes the theory.

Summarized, constructs, models, and methods are built to perform a particular task. These outputs then become the object of study, which must be evaluated scientifically. They have to be evaluated in order to conclude if any progress has been made. In order to do this, we have to develop metrics and measure the outputs according to those metrics. For instance, when an artefact has been applied in a specific environment, it is important to determine why and how the artefact worked or did not work - theorize. Then, given a generalization or theory we must justify that explanation by gathering evidence to test the theory in question. Justification generally follows the natural science methodologies governing data collection and analysis.

According to Rugman and Verbeke (2000), the “five forces model” for industry analysis (Porter, 1980) is a standard tool used by both academics and practitioners when conducting strategic management studies.

Porter (2004) puts forth that competition in an industry is rooted in its underlying economic structure and goes well beyond the behaviour of current competitors. He also proposes that competition in an industry depends on five basic competitive forces – Bargaining Power of suppliers, customers, Threat of new entrant, Threat of Substitutes, and Industry Rivalry (key structural features of the industry). This framework provides a structural analysis mechanism which is the fundamental step and a key building block in diagnosing industry competition in any country or in an international market.

An important extension to Porter’s work is found in the work of Brandenburger and Nalebuff (1995) in the mid-1990s. Using game theory, they added the concept of complementors (also called "the 6th force" a term which was coined by Andrew Grove, former CEO of Intel), helping to explain the reasoning behind strategic alliances.
Complementors are a very visible and influencing force in the globalized, competitive arena due to their inherent nature of “synergic value addition” to the core product or services of a supplier. It is a term used to describe businesses that sell a product/s or service/s that complement the product or service of another organization by adding value to them; for example, Intel and Microsoft (Pentium processors and Windows). Figure 2.1 depicts a visual representation of the “Six Forces Model” given below.

Figure 2.1 - The “Six Forces Model”

This approach was used along with others described below to have an initial insight into the constructs which influence business performance of the Life Sciences BPO Industry. On applying this analysis it was determined that – threat of substitutes are low, threat of new entrants is low due to high entry barriers, exit barriers are also low and competitive rivalry within the industry is also low since each of the player in this industry is still trying out various strategies and hence rules of engagement are not yet clearly defined.

Coupling this with a relatively higher bargaining power of suppliers compared to bargaining power of buyers and low bargaining power of complementors, we can conclude that, at this point in time, the Life Science BPO industry environment exhibits and facilitates a highly sustainable, high profitability scenario and is a very attractive segment for incubating new businesses, creating Pharma focused industry segments or creating new profitability, business models.
According to Shank & Govindarajan (1993) value chain analysis is undertaken in order to understand the behavior of costs and the sources of differentiation in an industry segment. The value chain framework is an approach for breaking down the sequence (chain) of business functions into strategically relevant activities through which utility / value is added to products and services. On completion of this analysis, the following structure represented under Figure 2.2 presented below can be constructed.

Figure 2.2 - Life Sciences BPO industry value chain and Market map

Further, as an extension to the value chain analysis Matthias and Frits (2001) tend to answer in their paper “Successful Build-to-Order Strategies Start with the Customer” the question – How holistic value chain strategies can be leveraged to enhances responsiveness to customer requirements/needs? and thereby argue that it is essential to see value creation as multidirectional rather than linear. Hence Frits and Matthias (2006) propose the notion of a “value grid” which has a multidimensional approach compared to the linear approach which the value chain analysis takes to understand the various value adding components, systems and their relationships.

2.1.5. Business Model Design Themes

Configuration theory provides a useful basis from which to evaluate different business model designs by considering holistic configurations, of design elements (Miles and Snow, 1978; Mintzberg, 1979). Configurations are constellations of design elements that commonly occur together because their interdependence makes them fall into
patterns (Meyer, Tsui and Hinings, 1993). The design elements of a business model are the context, structure, and governance of transactions that serve the focal firm to pursue, and exploit business opportunities. In this study, we follow Miller’s (1996) suggestion to study configuration as a variable rather than as a deviation from an ideal type (Doty, Glick, and Huber, 1993). Miller (1996) states that, “Configuration...can be defined as the degree to which an organization’s elements are orchestrated and connected by a single theme”.

### 2.2. Critical Success Factors (CSFs)

Spector (1992) recommends that researchers should first clearly define the construct /framework/phenomenon based on theory, and then develop items that support the definition, and take a confirmatory approach to validate the theoretical ideas guiding the creation of items. In addition, when working with a complex construct, Spector (1992) also recommends that researchers should partition the construct into several key dimensions to ensure the adequacy of the content domain and develop a scale with multiple subscales by creating items for each separate dimension of the construct.

Spector’s (1992) recommendation was implemented by utilising the method of Critical Success Factor identification and analysis was utilised to identify, categorise and depict the relationships between these Constructs or elements or concepts or critical success factors which influence business performance of organizations in the Life Sciences BPO Industry.

Critical success factors (CSFs) have been used significantly to present or identify a few key factors that organizations should focus on to be successful. As a definition, critical success factors refer to "the limited number of areas in which satisfactory results will ensure successful competitive performance for the individual, department, or organization" (Rockart and Bullen, 1986). In Rockhart’s (1979) seminal work surrounding CSFs from the viewpoint of chief executives, he states that the process of identifying CSFs helps to ensure that those factors receive the necessary attention. He further proposes that the procedure allows for clear definition of the type of information that the company needs and moves away from the trap of building a
system around data that are easy to collect. Rockhart’s (1979) work was based on research by D. Ronald Daniel, who was, according to Rockhart, the first person to discuss “success factors” in the management literature.

In Rockhart’s view, CSFs were those specifically distinguished areas that an organization needed to “get right” in order for the business to successfully compete. Based on this, identifying CSFs becomes critical as it allows firms to focus their efforts on building their capabilities to meet the CSFs, or even allow firms to decide if they have the capability to build the requirements necessary to meet CSFs and hence control business performance rather than the other way around.

Success factors were already being used as a term in management when Rockart and Bullen reintroduced the concept to provide greater understanding of the concept and, at the same time, give greater clarity of how CSFs can be identified. CSFs are primarily tailored to a firm’s particular situation as different situations (e.g. industry, division, individual) lead to different critical success factors. Rockart and Bullen presented five key sources of CSFs: the industry, competitive strategy and industry position, environmental factors, temporal factors, and managerial position (if considered from an individual’s point of view).

While Rockart and Bullen define the structured interview as the key method for identifying CSFs at the individual level, there are other methods that have been used and have been found to be effective in identifying them. These other methods have been identified as action research, case studies, Delphi technique, group interviewing, literature review, etc. Also, in selecting names to identify each category, an attempt should be made to make the name graphic enough to allow the reader to determine its referent.

According to literature, for the organization pursuing the CSF method, the foundation for writing good CSFs is a good understanding of the environment, the industry and the organization. In order to do so, this requires the use of information that is readily available in the public domain. Externally, industry information can be sourced from industry associations, news articles, trade associations, prospectuses of competitors, and equity/analyst reports. Other sources which would be helpful are interviews with
buyers and suppliers, industry experts and independent observers. These would all be helpful in building knowledge of the environment, the industry and competitors.

Extensive search and review of a large number of journals, publications, industry reports using keywords identified in a preliminary literature review was undertaken to identify CSF's specific to the study. Successive rounds of article abstract reviews resulted in identifying quite a number of articles that could guide the development of a theoretical definition of the Business Model construct – in general. But there were only a few articles which could guide the development of a theoretical definition of the Business Model construct specific to the Life Sciences BPO industry. Table 2.1 given below presents an overview of the literature review protocol.

Table 2.1 - Literature Review Protocol

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<th>Particulars</th>
<th>Description</th>
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<tr>
<td>1.</td>
<td>Purpose</td>
<td>• To identify existing Business Model Elements, Business Models, dependence of Business Performance on Business Models – if any in the Indian Life Sciences Business Process Outsourcing (BPO) Industry</td>
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| 2.  | Search Strategy | • Search by specific keywords  
• Duplicate references from the search were discarded  
• Potential cross-references including not only journal articles but also books, books chapters, conference papers and working papers were identified whilst reading these articles |
| 3.  | Exclusion Criteria | • An article will be excluded from the systematic review if the following criteria is met:  
• The majority of the article does not address the above identified purpose |
| 5.  | Databases | • ABI / ProQuest  
• EBSCO – Business Source Complete |

Although quite a bit of work is being conducted under this area of research as exemplified by the works of Xu et al., (2002); Soh et al., (2000); Ribbers and Schoo (2002); Scheer and Habermann (2000); Esteves-Sousa and Pastor-Collado (2000); Bingi et al., (1999); Al-Mashari et al., (2003); Hong and Kim (2002); Somers and

The observation that there has been no research conducted to date that has a direct impact on the topic under study, - the effect of business models on business performance, is a significant finding. To overcome this limitation, an initial pilot study with a focused sample of professionals from the life sciences BPO industry was undertaken. Details of the studies undertaken, the process and the results of these studies are presented under section 3.10 (Chapter 3).

2.3. Organization performance

One of the central functions of entrepreneurship and hence the organization is wealth creation. According to Knight (1921), entrepreneurs create wealth by purchasing resources at a price that is lower than their future value, which is uncertain at the time of purchase. Entrepreneurs are thus focused on the discovery and exploitation of opportunities for the creation of future goods and services (Shane and Venkatraman, 2000; Venkatraman, 1997).

However, recent work has begun to address the role of planning-related activities (Delmar and Shane, 2002; Magretta, 2002; McGrath and Macmillan, 2000), in particular that of design-related tasks (Van de Ven et al., 1984; Hargadorn and Yellowlees, 2001) as part of the organizational process.

In this study, we build on this emerging literature to examine the impact of business model design on the performance of entrepreneurial firms or organizations.

Organizational performance has been used widely as the most important criterion in evaluating organizations; however, researchers often pay little attention to what performance is and how it is measured (Richard et al., 2008).

There are several challenges researchers must overcome when attempting to measure organizational performance. First, organizational performance is multidimensional which makes it difficult to effectively understand its structure, scale, and scope (Devinney et al., 2005).
Next, the relationships between variables of interest (such as business model in this case) and performance can be influenced by other measures the organization uses internally and how they alter managerial decisions and actions (Devinney et al., 2005). Moreover, organizational performance varies over time and it is unclear which measures vary in which ways (Devinney et al., 2005). In addition, there are practical issues concerning which measures should be used (e.g., whether subjective vs. objective measures or financial vs. non-financial measures) (Devinney et al., 2005).

Although associated with the above indicated limitation, organizational performance is the ultimate dependent variable of interest for researchers concerned with just about any area of management. This broad construct is essential in allowing researchers and managers to evaluate firms over time and compare them to rivals. In short, organizational performance is the most important criterion in evaluating organizations, their actions, and environments.

March and Sutton (1997) found that of 439 articles in the Strategic Management Journal, the Academy of Management Journal and Administrative Science Quarterly over a three year period, 23% included some measure of performance as a dependent variable. In contrast to the dominant role that organizational performance plays in management fields, is the limited attention paid by researchers to what performance is and how it is measured.

In 1985, Rawley and Lipson examined the relationships among several combinations of performance measures to demonstrate that different common measures of financial performance did not represent the same attributes. Of these comparisons, the only overall performance measures that they found to be related to each other at statistically significant levels were the Q ratio versus cash flow return on investment ("CFROI") adjusted for the Capital Asset Pricing Model ("CAPM") discount rate, and market-to-book value versus return on investment adjusted for inflation.

The Q ratio was proposed by Callard and Kleinman (1985) as a substitute for Tobin’s Q, and is calculated as the ratio of the value of individual business units divided by the inflation adjusted purchase cost of assets. The other measures that they compared were clearly discriminant and do not measure the same construct.
Chakravarthy (1986) empirically compared seven exemplar firms with seven “maladapted” firms in the computer industry, as determined by corporate reputation. The criteria for selecting the samples were the criteria proposed by Peters and Waterman (1982) for “excellent” firms. Chakravarthy hypothesized that the means of the two groups, excellent and non-excellent firms, would differ along common measures of performance.

Accordingly, those measures of performance that demonstrated that the means of the two groups were statistically significantly different would be the best measures of performance for use in strategic management research.

The importance of this research was that no single profitability measure was capable of discriminating between the two groups of computer firms. This applied to both the accounting measures used and the market-based measure. As strategic performance deals with the future, Chakravarthy proposes that a firm needs slack resources to ensure its flexibility. Accordingly, in assessing strategic performance, the ability of a firm to produce slack resources is critical.

Brush and VanderWerf (1992) examined thirty-four different studies in the entrepreneurship literature that explicitly used firm performance as the dependent variable.

They found that thirty-five different measures of performance were used in those studies indicating that researchers perceived many different dimensions of performance, and that there was no agreement on what measures actually represent overall organizational performance. The most frequently used measures of performance were changes in sales, organizational survival, changes in number of employees, and profitability.

Multiple objective measures were much more frequently employed than were subjective or perceptual measures of performance. Further, the primary means of data collection was mail surveys, and the primary sources of performance information were managers, executives, founders or owners.

Robinson (1995) examined ten different new venture performance measures to determine which individual measure was the most effective in accurately assessing
long-term economic value creation. Each of the performance measures were calculated for the three-year period following the firms’ initial public offerings. A sample of 199 new ventures that had issued an initial public offering prospectus between 1980 and 1987 were used as the basis of the analysis.

The ten measures studied were (1) change in sales, (2) sales level, (3) return on sales (“ROS”), (4) return on invested capital (“ROIC”), (5) return on equity (“ROE”), (6) return on assets (“ROA”), (7) net profit, (8) earnings before interest and taxes (“EBIT”), (9) earnings multiples, and (10) shareholder value created. Robinson found strong support for his hypothesis that return to stockholders provided the most power of the ten measures evaluated in corroborating previously established relationships between the influence of new venture strategy and the joint influence of new venture and industry structure on the economic performance of new ventures. Robinson noted that these results corroborated the prior findings of Ball and Brown (1968) and Lev and Ohlson (1982).


They found, consistent with Brush and VanderWerf (1992) and Cooper (1993), that there was no consistency in the variables used to measure new venture performance. In total, they identified 71 different dependent variables used to measure performance in their sample. They subsequently categorized these variables into eight separate dimensions of performance. They also found that 75% of the sample articles used primary data sources, 29% used secondary data sources, and only 6% used both. The high dependence upon primary data sources is typical in Entrepreneurship research, since there are generally no publicly available financial data sources for non-public companies. Another finding was that the performance variables used were primarily financial rather than operational.
Four primary categories of performance are depicted below since there is no authoritative list of performance categories in the prior literature, the categories of performance measures discussed in this chapter are based upon general classifications of performance measures often found in finance and accounting texts (Brealey, et al., 2001; Helfert, 1994; Higgins, 1995; Penman, 2001).

The primary variables used in research and practice to represent the overall organizational performance construct can be categorized into several distinct groupings. The four primary categories of overall organizational performance variables used in recent empirical research identified above include (1) accounting measures, (2) operational measures, (3) market based measures, and (4) survival measures. In addition, measures of economic value creation are popular in practice but are not frequently used in strategic management or entrepreneurship research.

ACCOUNTING MEASURES: Accounting measures are those that rely upon financial information reported in income statements, balance sheets, and statements of cash flows. Accounting measures can be further subcategorized into profitability measures, growth measures, leverage, liquidity, and cash flow measures, and efficiency measures.

Profitability Measures: Profitability measures include values and ratios that incorporate net income or a component of net income such as operating income or earnings before taxes. It is through the generation of a profit that an organization is able to provide a return to providers of equity capital, once the profits have been converted into liquid assets. In the absence of profits or the likely prospect for profits, equity capital providers will withdraw their resources from an organization and redeploy them to alternative investments where a positive return can be realized.

Growth Measures: Growth measures include values and ratios that present some indication of organizational growth. Growth has been conceptualized both in the context of resources and from a business operations perspective. Typical accounting-based growth measures include absolute or percentage change in total assets, operating assets, sales, total expenses, and operating expenses.

Leverage, Liquidity, and Cash Flow Measures: Leverage, liquidity, and cash flow measures include values and ratios that represent the organization’s ability to meet its
financial obligations in a timely manner and provide a cash return to capital providers. The ability to meet financial obligations can be measured both by the ratio of liquid assets to liabilities, and/or by the organization’s ability to generate sufficient cash flow to meet outstanding liabilities.

Efficiency Measures: Efficiency measures include values and ratios that represent how well the organization utilizes its resources. Typical efficiency ratios include asset turnover, net profit per employee, net profit per square foot, sales per employee, and sales per square foot. Clearly, most efficiency ratios require information that comes from outside the three basic financial statements.

Operational Measures: Operational measures include variables that represent how the organization is performing on non-financial issues. Measuring performance on non-financial dimensions has received renewed attention over the past many years as corporations have adopted a “balanced scorecard” approach for the integration of strategy and performance measurement (Kaplan, 1984; Kaplan and Norton 1992). These variables include market share, changes in intangible assets such as patents or human resources, customer satisfaction, and stakeholder performance. Most of the measures in this category require primary data from management in the form of their assessment of their own performance, which may lead to questions of the validity of the responses.

Survival Measures: Survival measures of performance simply indicate if the organization remained in business over the time period of interest. Barnard (1938) and Drucker (1954) proposed that survival is the ultimate measure of long-term performance. However, since most empirical research in entrepreneurship and strategic management address time horizons five years and less, survival is rarely used as a measure of overall organizational performance.

Economic Value Measures: Economic value measures of performance are adjusted accounting measures that take into consideration the cost of capital and some of the influences of external financial reporting rules. These measures have not been used by researchers in strategic management or entrepreneurship empirical studies because the values are not generally reported and most companies do not even
calculate them internally. Typical economic value measures include residual income, economic value added, and cash flow return on investment.

**MARKET-BASED MEASURES:** Market-based measures of performance include ratios or rates of change that incorporate the market value of the organization. Examples of these variables include returns to shareholders, market value added, holding period returns, Jensen’s alpha, and Tobin’s Q. The calculation of these variables requires a market valuation for the company and is generally only available for publicly traded companies.

Market-based measures have been hailed as the best possible measures of organizational economic performance (Copeland et al., 2000; Rappaport, 1986; Robinson, 1995). They have also been criticized (Bromiley, 1990).

There are several key arguments in favour of market-based measures. First, they include the value created by both the execution on existing opportunities, as well as the risk adjusted expected value of future opportunities that have yet to be realized.

Second, and perhaps more important, the issues with accounting-based measures do not affect stockholder returns (Brush et al., 2000), since accounting measures are subject to manipulation by management while a well regulated market is generally not subject to manipulation.

Third, if one accepts the assumption that markets are relatively efficient (and this is still a matter of considerable scholarly debate), market-based measures quickly reflect management actions and changes in the economic value of the organization. Also, since the value of past actions are also quickly incorporated into the market value of the organization, the change in market value during a given period can be assumed to reflect the actions taken by management and changes in general market conditions during that specific time. In contrast, changes in accounting-based measures may lag managerial actions by considerable periods, which introduces problems for researchers since intervening events with shorter time lags between action and effect may also act on accounting-based measures during the lag period in question.

Criticisms of using market-based measures are also numerous. First, under efficient market theories, changes in returns to capital providers in excess of the weighted
average cost of capital of the organization are considered surprises to the market. If the market anticipates an organization’s sales and profit growth correctly, then the risk adjusted present value of these expectations are already incorporated into the market value of the organization (Bromiley, 1990). While this assertion is true, it seems intuitive that entrepreneurship and strategic management researchers are looking for exactly this information. Specifically, the changes in market value that researchers are interested in are those that are created by the new actions of management.

The only way the market could anticipate sales and profitability growth is if there already existed information, based upon actions already taken by the organization’s management, which is incorporated in the beginning market value of the organization. Therefore, market “surprises” must result from new information that becomes available to the market. Under efficient market theories, this new information must come from (1) a more complete understanding about the consequences of past management actions, (2) new actions taken by the organization, or (3) changes in the organization’s operating environment. Controlling for the external changes in the organization’s operating environment should result in capturing the effects of firm-specific actions in the market-based measure.

In finance terms, entrepreneurship and strategic management researchers are interested in unsystematic risk, or the variance in the price of an individual stock that results from unique circumstances of the company, not the market as a whole (Brealey, et al., 2001). Bromiley (1990) argues that strategic managers do not manage stock prices. Managers attempt to influence sales, profits, capital structure, etc. Since the relationship between these individual measures and changes in stock prices is only partially understood, the use of changes in stock prices and the associated concepts of risk are difficult to apply to strategic management research.

Bromiley further argues that stock market returns focus only on the objectives of shareholders. Many strategic management theorists believe that corporations have multiple goals (Cyert and March, 1963; Freeman, 1984).

Conversely, finance theory proposes that the market for corporate control results in management being replaced if they do not act in the best interest of shareholders.
Accordingly, shareholder goals become primary in the management of for-profit firms, and managers must make decisions guided by this principle or risk being replaced. **Therefore, maximizing shareholder value, however shareholders define value, becomes the primary aim of managers.**

Based on above literature research the market based measure returns to shareholders (RTS) was selected in this study to represent business performance. Another reason why this measure was chosen is that ultimately one of the most critical business performance factors is what the shareholder gets for his investment. The corporate governance literature also regards dismissal as the ultimate device to discipline top management Bushman and Smith (2001); Menon and Williams (2008); Volpin, (2002) and also poor RTS as one of the major reasons for the ouster of the CFO of organization.

Dess and Robinson (1984) assert that research involving organizational performance must address two basic issues: (1) selection of a conceptual framework from which organizational performance is defined and (2) identification of valid measures to operationalize organizational performance. In this study we use this approach. The conceptual framework being the value obtained from the generic business model framework for the Life Sciences BPO industry and the valid measure selected will be returns to shareholders (RTS).

### 2.4. Business Models and Business Performance

Magretta (2002) specifies that a business model should answer the following questions: Who is the customer? What does the customer value? How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?

Müller-Stewens and Lechner (2005) adopt the following viewpoint: “A business model defines how a firm’s particular configuration of the value chain is made concrete through adoption of a “capitalization perspective”, thereby answering the question “How do we make money in this business?”: The business model bridges the gap to operative management by answering the questions: Which services shall be
offered to which customers? How and within which structure shall these services be offered? How do I win, foster and keep appropriate customers? How shall the revenue model be defined concretely?"

Considering the above, it becomes imperative that ultimately a business model should demonstrate a relationship to business performance. Although the most preferable or anticipated outcome should be in the positive direction, a negative outcome based on this relationship would give the organizations a strategic direction on the way forward to move the direction of business performance outcome from a negative to positive one.

The next obvious step during this phase of the study was to survey the literature to identify articles/studies which could throw light on the question of relationship between business models and business performance. Continuing in this direction yielded the following studies and their conclusions.

Different theories have been proposed, to explain the difference in performance among organizations, many of which are aligned with either the "industry view" or the "firm/organizational view".

The "industry view" suggests that industry factors, such as market size and barriers to entry, form the most important explanation for why organizations exhibit different performance (Porter, 1980). The "firm view" argues that a firm's endowments and capabilities, and the difficulty of replicating these, are why firms exhibit performance heterogeneity (Wernerfelt, 1984).

The empirical literature focuses on disentangling the industry and firm explanations of performance heterogeneity. (Schmalensee, 1985), using 1975 data on lines of businesses and reports that industry explains 20% of return on assets (ROA) heterogeneity, while firm – using market share as a proxy – has negligible explanatory power.

Rumelt, (1991) uses four years of Federal Trade Commission data and a composite measure of firm effects. Unlike Schmalensee, he reports that firm (business unit) effects account for 34 to 46% of explained ROA heterogeneity while industry effects account for only 8 to 18%, of which about half of this is transient, as measured by the
interaction of industry effects with year effects. Rumelt also includes a corporate-parent effect and finds that it is negligible. This is interpreted as consistent with the firm view: corporate strategy that structures industry and positions a firm within that industry does not matter, Carroll (1993), Ghemawat et al., (1993); Hoskisson, (1993).


There is also an important branch of the empirical literature, Denrell (2004), McGahan et al., (1999), that argues that it is “persistence” that is important, and on this measure, industry effects dominate.


Amit and Zott (2001) identified critical dimensions of business model design, which they refer to as design themes, and by measuring and quantifying these dimensions, they showed that: (i) business model design matters to the performance of entrepreneurial firms, and (ii) business model design themes have a differential impact on performance under varying environmental conditions. They also discuss on how their research relates to the findings on the effect of novelty, efficiency, and their interaction on firm performance by researchers focusing on different levels of analysis.

Their analysis highlights the business model as an emerging unit of analysis for entrepreneurship and management research and also provide empirical support for the suggestion that the design themes of a firm’s business model are determinants of performance. They are also clear in stating that business models complement, but do not replace, firm specific and industry specific effects on firm performance (Rumelt, 1991; McGahan and Porter, 1999; Hawawini et al., 2005).
They also offer the following important implications for practitioners:

- Corroborate the premise that in a highly interconnected world enabled by advances in information and communication technologies, entrepreneurs, and entrepreneurial managers alike may consider looking beyond firm and industry boundaries in order to create and capture business opportunities.

- In order to succeed, entrepreneurs need to not only strike a balance between novel and familiar design elements (Hargadorn and Yellowlees, 2001), but also find the right mix of design themes (i.e., novelty versus efficiency) in the sense that there is a need to adapt the design of a business model to a changing environment.

Some of the limitations indicated in this study include the need to determine the generalizability of their findings for different types of ventures in different industries and for firms at different stages of the venture life cycle. They also indicate that the inclusion of salient business model characteristics, such as design themes, as independent or dependent variables in research on emerging organizations (Aldrich, 1999), offer the unique opportunity to establish a more clearly defined identity of entrepreneurship as an independent field of scholarly inquiry.

Chesbrough and Rosenbloom (2002) investigated the role of the business model in innovation led industries (technology). The biomedical industry survives on innovation and hence this study help us get a better insight into how business models affect innovation. They indicate that discovering a viable business model for these innovations is a critical and neglected dimension of creating value for an innovation lead organization.

They also offer an interpretation that the business model is a construct that mediates the value creation process and translates between the technical and the economic domains, selecting and filtering innovations, and packaging them into particular configurations to be offered to a chosen target market, essentially what happens in the biomedical industry.

They also advocate the need for heuristic logic to discover an appropriate business model for this neglected dimension.
According to Melone et al., (2006) who formulated a fundamental, reliable and practical typological definition of business models, classified U.S. firms (10,419 publicly traded United States firms) at the segment level by business model, and investigated if business models might explain performance heterogeneity, they found that business model effects are larger than year effects. They also dominate industry effects, when industry was measured at the comparative (i.e., one-digit NAICS) level. Their conclusion was robust to very many econometric issues as well as alternative interpretations.

The organizational performance literature also points out the importance of the relationship between non-financial and financial organizational performance and how organizational performance can be justifiably evaluated through perceptual scales. Therefore, organizational performance was operationalized as non-financial performance and financial performance and was measured with existing scales found in the literature (Martinez and Kennerley, 2005; Mausolf and Spence, 2008; Melkers and Willoughby, 2005).

In summary, it becomes clear that there exists a relationship between business models and business performance of organizations. Hence determining a specific business model configuration for the specific organization in a specific industry becomes critical for its survival and success.

It is also evident that there are no industry specific models, frameworks, tools which can be applied to create a business model, study effects of varying individual components on business performance and comparing different organizations with their own unique business models. Hence there is a dire need to create an industry specific generic business model framework which can predict business performance of an organization. This should also provide an option for studying the effect of the model on performance when constituent business model variables are manipulated.

The above sections conclude the review of literature and support the development of this research study.