

Aligning IT strategy with business strategy :A case study of global IT consultancy firms

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Abstract

Traditionally IT played a supportive and administrative role within organizations, however the increasing complexity in business environment and rapid development of IT has empowered IT to play a strategic role that leverages and sustains organisational strategy. Furthermore, alignment or fit between IT strategy and business strategy is very significant and both researchers and practitioners advocate such alignment. The main objective of this thesis is to acquire in-depth insight on how three major IT consultancy firm Accenture, Tata Consultancy Services, and Cognizant Technology Solutions headquartered in three different continents leverage IT strategy to reinforce business strategy for clients. In addition, the study also aims to deduce how the case companies comprehension and approach to strategic themes related to IT strategy diverge and converge from each other.

The literature review acquaints the readers with the origin of the term strategy and how the meaning of the term itself has evolved and undergone several changes over time. Furthermore the review also sheds light on how scholars and academics elucidate, describe and portray “strategy”. Besides the literature review also expands on various strategic themes that are significant for business like strategic change and its protagonists, connection between strategy and organizational structure, significance of strategic alliances and partnerships ,strategic decision making under uncertainty and significance of performance measurement and goal setting for strategy work. Additionally the review also examines how scholars elucidate and describe information technology and various dimensions, levels and significance of business –IT alignment. The research methodology chosen for this thesis is qualitative multiple case study of case companies. The research utilizes secondary data accumulated from case company’s official website. The empirical research section mainly comprises of three parts : description of case companies elucidation of IT strategy to potential clients, thematic content analysis of various strategic IT services offered by case companies to sustain and reinforce business strategies, and cross case analysis of three case companies.

The research has revealed that the case companies are quite similar in their perception and description of IT strategy. A closer look at the data yielded by the study indicates that the case companies describe IT strategy as tool, formula or package of services that helps companies in pursuing and attaining superior competitiveness. Furthermore, the research also provides important insights on key themes within strategic IT services offered by case companies to sustain and reinforce business strategies. In essence, the key themes are strategic change, organizational structure re-design, strategic partnership, decision making under uncertainty, performance measurement and goal setting. Besides, the data yielded by this study appears to suggest that the case companies offer strikingly similar services related to IT strategy . Services albeit are titled and marketed differently, but if one scrutinizes the offerings in details, one will easily come to conclusion that the core services are quite similar. In addition, it is worth noting that the case companies comprehension and approach to key themes within strategic IT services is strikingly similar to academic research on similar strategic themes.

Keywords IT, Strategy, alignment, Strategic themes Kirjoita tekstiä napsauttamalla tätä.

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1. Introduction

The idea for this topic was conceived after I undertook various courses in Strategy and most importantly the Strategy work course. Consequently, it became evident to me that many companies are interested in demystifying the elusive concept of “strategy” because managers are of the opinion that certain strategic processes and practises helps in generating long term economic profit and provides them with competitive advantage. Additionally, it also came to light that the business landscape is dynamic and evolving at an accelerating rate, so a company has to renew, innovate and align itself continuously with external landscape. It is no secret that continuous alignment and renewal invariably involves innovative technology. Furthermore, this is an era of digitalization and virtualization and it is quite evident that businesses around the world are leveraging the power of IT strategy to pursue superior competitiveness. In essence the guest lecturers made it quite clear that in current digital era there exists an intricate connection between business strategy and IT.

IT has become an integral aspect of business. Infact, business and IT have become so intertwined that it will not be an exaggeration to state that without IT, it will be impossible to run a business profitably. IT plays a strategic role in all business; in small business IT is present in the form of computer or laptop while in multinational corporations IT is present in the form of information database, mainframe computer, predictive analytics, big data, data mining, software like SAP and ERP etc. The power of IT is being leveraged for formulating and reinforcing strategies across all business domain like marketing, finance, customer relationship management, human resource etc.

IT plays a vital role in almost all key processes related to business like communication, inventory management, data management and customer relationship management. A guest lecturer from Google revealed that the main motive behind business –IT alignment is to maximize the value that IT strategy generates for that particular organization. The intriguing nature of business-IT alignment further motivated me to analyse how major IT consultancy firms actually align IT strategy with business strategy to reinforce and sustain organizational strategy.

Traditionally IT played a supportive and administrative role within organizations , however the increasing complexity in business environment and rapid development of IT has empowered IT to play a strategic role that leverages and sustains organisational strategy. However alignment or fit between IT strategy and business strategy is very significant and both researchers and practitioners advocate such alignment. Strategic decisions undertaken in the domain of business impacts IT strategy and IT strategy can augment or debilitate business strategy .

Alignment ensures that IT strategy leverages and sustains business strategy by managing various IT infrastructures and processes . Top managers formulate strategy and IT managers within organizations implement such strategies by dint of information service management. As a matter of fact, IT strategy can redesign business strategy by influencing new product and service decisions, aid the company in engendering distinctive competitive advantage, and help the company in managing business governance and business relationships more strategically. (Henderson & Venkatraman, 1993).

Research has provided conclusive evidence that proves that organizations that align IT strategy with strong business strategy achieve and sustain growth and profitability. Information technology strengthens business strategy and aids strategists to become more analytical and future oriented by providing the required data, applications and software. Additionally various research conducted in this area has revealed that strategically oriented organizations design and manage impeccable IT strategy. (Bergeron & Raymond, 1995).

In the domain of IT consulting, three companies stand out from the crowd because of their reputation, client base, quality framework and highly trained consultants. They are Tata Consultancy Services headquartered in Mumbai, Asia, Accenture headquartered in Dublin, Europe and Cognizant Technology Solutions headquartered in Teaneck, NJ, North America. These three companies possess a global client base comprising of world's leading companies. Additionally these companies have a strong network of alliance with global players like Microsoft, Google, IBM, HP etc. Furthermore, these companies are trailblazers in developing innovative technology that few competitors can match.

Given the strategic significance of the abovementioned IT consulting firms, it was a rational decision on my part to choose these companies for the purpose of my case study. Additionally, these companies possess in-depth knowledge, experience and expertise in strategies related to business-IT alignment. Since my objective in this thesis will be to study

the business-IT alignment process, naturally the chosen companies are perfect for the purpose of my analysis. Besides, the thesis will study how the case companies elucidate IT strategy to potential clients which ultimately elicits clients interest in business-IT alignment.. Furthermore the study will also focus on how case companies leverage IT strategy to reinforce business strategy by offering specially designed strategic IT services. Finally the thesis aims at studying various similarities and differences concerning case companies comprehension of strategic themes related to IT strategy.

1.1 Purpose of the study

The main purpose of this study is to deduce how major IT consultancy firms headquartered in three different continents co-ordinate and leverage IT strategy to reinforce business strategy. Therefore the main focus of this thesis will be to identify key themes within strategic IT services offered by case companies to sustain and reinforce business strategies. Additionally the thesis also aims at identifying how the case companies describe IT strategy to potential clients because this description will ultimately elicit client's interest and motivation in business-IT alignment. In other words, the case companies portrayal of IT strategy will ultimately motivate clients to acquire and align IT strategy with business strategy. The secondary focus of this thesis will be to study the case companies comprehension and approach towards strategic themes related to IT strategy and how they diverge and converge from each other.

A qualitative multiple case study was conducted for the purpose of this thesis. The case companies chosen for the purpose of case study were Accenture headquartered in Dublin, Europe, Tata Consultancy Services headquartered in Mumbai, Asia, and Cognizant Technology Solutions headquartered in Teaneck, NJ, North America. Research data for this thesis was collected from various secondary sources like case companies websites, annual reports, white papers and other publicly available official materials published by case companies.

Broadly speaking the empirical section consists of three main parts. The first part comprises of description of case companies elucidation of IT strategy to potential clients. In my opinion elucidation of IT strategy to potential clients plays a significant role in influencing clients to purchase IT strategy with the objective of business-IT alignment. The second part

focuses on thematic content analysis of various strategic IT services offered by case companies to sustain and reinforce business strategies. The final part comprises of cross case analysis of three case companies. The cross case analysis is an endeavour to elaborate how the companies comprehension and approach to strategic themes related to IT strategy diverge and converge from each other.

The data for this research was collected from various secondary sources like the case companies website, annual reports, white papers and other publicly available sources. Generally speaking, I started the data collection process by browsing through the case companies official websites and then I gradually proceeded to other sources like annual reports, white papers and other reliable secondary sources cited by the case companies in their official website.

The data analysis process proceeded in two steps .Firstly I conducted within case analysis of individual case companies which was followed by cross-case analysis of all three case companies. It is worth mentioning that throughout my research I adopted an iterative and adductive methodology

The main research question for my thesis is “How do the case companies leverage and align IT strategy to execute and sustain business strategy”. Furthermore, in order to acquire concrete and succinct answers to my main question I have developed three research questions. These questions are :

1. How do the case companies elucidate, portray and describe IT strategy to potential clients
2. What are the key themes within strategic IT services offered by case companies to sustain and reinforce business strategies
3. How do the case companies comprehension and approach to strategic themes related to IT strategy diverge and converge from each other

1.2.Key Concepts

Strategy : Strategy can be defined as various activities that strengthens the competitive position of the firm undertaking such actions and encompass planning, monitoring and executing pre-planned operations. (Grandy & Mills, 2004).

Business Strategy : Business strategy essentially encapsulates a formula regarding the specific way a business will compete, its goals and the policies necessary to achieve those goals. In essence competitive strategy consists of goals and policies that materializes those goals.(Porter 2008, 24)

Information Technology (IT) : Information technology can be defined as the sum total of all investment that a firm has made in assets like hardware, computing, software, communication technology and telecommunication. (Broadbent,1998).

IT Strategy : IT strategy identifies and utilizes the strategic potential of IT in business. (Phillip et al.,1995).

Alignment : Alignment is the extent to which objectives and mission present in the business strategy are shared and reinforced by IT strategy. (Reich and Benbasat, 1996).

Leverage : The ability to exert power and authority on an environment or system in such a way that the outcome of one's endeavour is multiplied with no corresponding increase in resource consumption.(Business dictionary, 2015).

1.3 Methodology

I conducted a qualitative multiple case study for the purpose of this thesis. The case companies chosen for the purpose of case study were Accenture headquartered in Dublin, Europe, Tata Consultancy Services headquartered in Mumbai, Asia, and Cognizant Technology Solutions headquartered in Teaneck, NJ, North America. My choice of case companies was influenced by the fact that these companies are market leaders and dominant players in their respective continents and possess in-depth knowledge and expertise in business-IT alignment.

Research data for this thesis was accumulated from various secondary sources like case companies websites, annual reports, white papers and other publicly available official materials published by case companies. The data collection process commenced during December 2014 and was finalized during May 2015. I also ensured that my data is up to date by reviewing all data at the end of the process. The data analysis process proceeded in two

steps .Firstly I conducted within case analysis of individual case companies which was followed by cross-case analysis of all three case companies.

The empirical section consists of three main parts. The first part comprises of description and of case companies elucidation of IT strategy to potential clients. In my opinion elucidation of IT strategy to potential clients plays a significant role in influencing clients to purchase and align IT strategy with business strategy. The second part focuses on thematic content analysis of various strategic IT services offered by case companies to sustain and reinforce business strategies. The final part comprises of cross case analysis of three case companies. The cross case analysis is an endeavour to elaborate how the companies comprehension and approach to strategic themes related to IT strategy diverge and converge from each other.

1.4. Structure of the thesis

The second chapter mainly comprises of literature review of various prior research on strategy, IT and their intricate connection for superior business performance. The literature review takes the form of four distinct parts. The first part describes the origin of the term strategy and how the meaning of the term itself has evolved and undergone several changes over time. Additionally, this part also reviews how different scholars and academics elucidate, describe and portray “strategy”.

The second part reviews literature on various strategic themes that are significant for business. This part is further subdivided into five main sub-parts : strategic change and its protagonists, significance of performance measurement and goal setting for strategy work, connection between strategy and organizational structure, significance of strategic alliances and partnerships and strategic decision making under uncertainty. The third and fourth part examines how scholars elucidate and describe information technology and various dimensions, levels and significance of business –IT alignment.

The third chapter elaborates on research methodology, the rationale for my choice of methodology as well as reliability and validity of this thesis. The fourth chapter focuses on empirical research and it comprises of four main parts : introduction to case companies, description of case companies elucidation of IT strategy to potential clients, thematic content

analysis of various strategic IT services offered by case companies to sustain and reinforce business strategies and finally cross case analysis of three case companies.

The fifth and the final chapter of the thesis summarizes the important findings of the research along with their implications. It is worth mentioning that this research has shed light on several important questions that requires further investigation. With this in mind, ideas for further research has also been suggested in this chapter.

2. Literature Review

The main focus of this chapter is to review various prior research on strategy, IT and their intricate connection for superior business performance. The literary review commences with description of the origin of the term strategy and how the meaning of the term itself has evolved and undergone several changes over time. Additionally, this part also reviews how different scholars and academics elucidate, describe and portray “strategy”. The literary review then gradually proceeds to other important themes related to strategy, IT and their intricate connection like strategic change and its protagonists, significance of performance measurement and goal setting, connection between strategy and organizational structure, elucidation of information technology and its intricate connection with superior business performance.

2.1 Elucidating Strategy

It’s indeed a daunting task to elucidate what strategy exactly means given that different scholars have defined strategy differently and its quite challenging to find a single definition of strategy that fits all cases. The origin of the term strategy has roots in ancient Greece where strategy was essentially connected with army commander in chief or magistrate. Eventually the term was polished and distilled by military analysts Carl von Clausewitz who viewed strategy as the process of utilizing engagements for the purpose of war. It was in twentieth century that the term was adopted and used extensively in business. The business executives of M –form corporations recognised and expressed the need for formal strategy in their endeavour to alter and control the business landscape. The CEO of General Motors,

Alfred Sloan formulated a business strategy based on strengths and weakness of his corporations Ford. (Ghemawat, 2002).

Additionally, in 1930, Chester Barnard, a high ranking executive of AT & T proposed that managers should take “strategic factors” into account that is closely related to organizational actions. Furthermore the World War 11 posed new challenges rendering “strategic thinking” inevitable in management and business. In the academic world, Harvard Business School was pioneer in proposing that managers should acquire the art of strategic thinking because managers are much more than mere administrators. As a matter of fact, in 1950’s two professors of Harvard, George Albert Smith Jr., and C. Roland Christensen encouraged business students to investigate whether the strategy of a firm was aligned with its environment. According to Bruce Henderson, founder of BCG, good strategy must be formulated utilizing logic and not experience or intuition. He firmly believed that universal laws of strategy can be designed by dint of economic theory. (Ghemawat, 2002).

According to Porter (2008,24) a competitive strategy essentially encapsulates a formula regarding the specific way a business will compete, its goals and the policies necessary to achieve those goals. In essence competitive strategy consists of goals and policies that materializes those goals.

If one visualizes organizations as culmination of continuously reproducing subjects and objects, then organizational strategy can be conceptualized as deliberate actions that brings forth this transformation. (Shrivastava,1986). As a matter of fact, strategy at its core is what strategists and other players do. Strategy talk involves communicating, negotiating and persuading people to works towards a visionary goal. Henry’s Mintzbergs 5 P’s (Mintzberg, 1987). are important aspects of strategy. However the core idea about strategy should be same within an organization. If different people within an organization have different worldview, goals and assumptions about strategy it will lead to chaos. Therefore it is important to have frequent discussions, brainstorming, alliance management and coalition building. Furthermore, since business landscape is dynamic and evolving, strategy should be constantly re-aligned with external landscape. Strategy as practise scholars are of the view that strategy is materialized only when it’s done in the organization and “doing strategy” invariably involves people. (Earner,2014)

However the very definition of strategy undergoes transformation in almost every era because every era engenders new strategic management practises owing to new complexities. In other words as rules of the game undergoes change, strategic practises and definition of strategy undergoes change as well. In high velocity industries this change is more rapid than stable industries. Actors within organizations play a crucial role in engendering strategy by participating in adaptive and recursive practises. (Jarzabkowski, 2004). Traditionally, strategy was viewed as something that organizations possessed; however there has been a shift in this viewpoint brought about by strategy as practise scholars who conceptualize strategy as something that people do. Strategy can also be viewed as an industry produced by actors in business, consultancy firms and numerous stakeholders which in turn moulds and shapes the world that we inhabit.. In essence strategy is an activity that occurs within organizations as well as beyond it.(Whittington, 2006).

When modelling and scenario analysis is considered, strategy becomes a process wherein key decisions makers dispense their knowledge and experience by revealing their mental models. (Grant, 2003). Ideally strategy should be aligned with the mental model/cognitive framework of social capital within an organization. If people within an organization are culturally programmed to work in departmental silos and strong hierarchical structures then a radical and sudden change in strategy to increase lateral connection, cross departmental interaction and flat structure might not be successful. The change process should be incremental and continuous. Persuading, involving and inspiring people to work towards shared vision are also vital components of strategy Furthermore, middle managers and employees who work closely with customers play important roles in materializing strategy. (Earner,2014)

Strategy encapsulates various activities that strengthens the competitive position of the firm undertaking such actions and encompass planning, monitoring and executing pre-planned operations. Strategic management is akin to medicine and engineering; skilled actors perform crucial tasks that are vital part of our civilization and such tasks are recorded, codified and taught so that society in general can benefit from such knowledge. However currently strategy has entered a phase that can be termed as third order simulacra and most if not all models that claims to represent strategic reasoning and assessment are disengaged from the real world. (Grandy & Mills, 2004).

Modelling or associating worldview with reality has become an integral part of strategic management. These models aid strategists to manage complex realities by dint of logic, rationality and objectivity. These hyper real models creates the fabric of multiple layers that establishes strategy and strategic management as the ultimate truth that can forecast, comprehend and solve all organizational problems. However it is no secret that “truth” is often institutionalized by actors who wield power and knowledge. (Grandy & Mills, 2004). Study of successful oil majors has revealed what strategy actually depicts in real world ; strategy process is synonymous with “planned emergence” i.e. decisions makers design a flexible corporate structure wherein strategy emerges as a result of decentralized, informal bottom –up endeavours in an incremental fashion. (Grant, 2003)

The playfield of business is inhabited by multiple players each pursuing their own agenda. The final outcome of a strategist’s actions is interlinked and influenced by all players at a given time, past decisions and payoffs. (Barraclough et al.,2004) As a matter of fact, strategy is quite similar to a game of chess where players make their moves after analysing and speculating opponent’s possible moves. Co-operation, networking and alliance management is indispensable for success. The resource based view lays emphasis on developing core competence. Besides, business landscape is also important in this regard but one must remember that with blue ocean strategy (Chan et al.,2011.) it is possible to alter landscape and re-design industry boundaries. Adopting a proactive stance, continuously analysing multiple hypothetical scenarios and continuous alignment with eco-system are crucial steps for success of any strategy. (Earner,2014)

The upstream of strategy comprises of mission and vision while downstream encapsulates operation and tactics As a matter of fact, the strategists should maintain balance between order and chaos to engender innovation. “PowerPoint strategy” formulation and management fashion oversimplifies real world problems and thwarts innovation. A strategist should be adept in ambidexterity and balance innovation and value generation. Overtly innovative ideas that lack resource for their implementation or fail to deliver value to customers at the right price will fail to create value for organization. (Earner,2014)

Strategy is essentially a revolution and if it cannot be classified as such, it is merely tactics. Besides, planning is not same as strategizing and it might even undermine a company’s creative potential. Strategy is disruptive; it breaks rules, redefines industry and facilitates

revolution. In addition, experience is becoming irrelevant for strategy formulation because future will not resemble past. (Hamel, 1996)

A good strategy creates and sustains lateral connection within various departments and capitalizes on open innovation partnerships. Additionally, a good strategy also maintains balance between relaxation and urgency and facilitate “resource fluidity” by reallocating resources strategically. In practise this means probing the future with big data and technology instead of relying on past experience and hunch and divesting resource from less profitable sectors to promising new sectors. At the same time, strategists should resist the temptation of “management fashion” like strategic tools, motivational talk and bestsellers and realize that there are many paths towards good strategy and paths evolve and change dynamically. Besides a good strategy involves identifying and stripping power form overtly obnoxious and selfish individuals within organizations because they hinder value creation. Engendering co creation by formulating vivid stories to establish shared vision is also a vital aspect of good strategy. (Earner,2014)

Besides, middle managers, team leaders and supervisors are significant players in strategy formulation and implementation because they are more in touch with real world situations and customer expectations. A good strategy ensures that people are happy and engaged. Happy employees, team leaders and middle managers automatically align themselves with corporate strategy. Furthermore, in the context of global economy, strategy should be aligned and customized in accordance with geography and culture. Strategy should be flexible, practical, dynamic, open to alternative avenues and a strategists should be well acquainted with underlying assumptions behind each theory. (Earner,2014).

2.2. Key Themes in Strategy

The main focus of this chapter is to provide important insight on current strategic themes related to business like strategic change, organizational structure re-design, strategic partnership, decision making under uncertainty and performance measurement and goal setting. In the subsequent pages, academic research related to aforementioned strategic themes will be discussed in details.

2.2.1.Strategic Change and its protagonists

The dynamic and evolving nature of business environment has rendered strategic change inevitable in current business landscape. Burgelman (1994) compares business landscape with nature where evolution and dynamic changes renders old competencies obsolete and consequently companies are required to undergo mutation, change and evolution to develop new competencies. But the big question that intrigues scholars and practitioners alike is who exactly is the main protagonist of organizational change and how is the change process initiated and driven to completion.

Balogun & Johnson (2004) examine how change or transition process of a company influences the cognitive framework, schemata and mental model of everyone involved. Besides, they point out that middle managers are usually not empowered to design the change process, nonetheless they are expected to make sense of it and help other employees interpret and adjust to the change. Furthermore, the research provides conclusive evidence that suggests that middle managers play a more active role than senior managers in influencing and moulding other employee's schemata. Contrary to Labianca's studies the authors found that both relocation and replacement sequence are present during change.

In the same vein, Burgelman (1994) examines various factors that helped Intel to undergo transition and reinvent itself by strategically exiting and divesting resources from non-profitable sectors. The author is of the opinion that the main driver of this positive change was "internal selection environment" that empowered middle managers to diverge from corporate strategy and develop their own strategy. As a matter of fact, it was mainly due to middle managers initiative that the change process was successful

Huy (2001) puts forward the propositions that middle managers often play strategic and important roles when an organization undergoes radical change. However, senior managers often ignore the contribution of middle managers in bringing about a radical change. Middle managers typically contribute in four main ways. Firstly, middle managers often possess entrepreneurial ideas that they can competently materialize. However, senior managers can facilitate this process by giving managers a chance to reveal their ideas. Secondly, middle managers are quite competent in leveraging informal network. This is because they have used networking while ascending the corporate ladder. Thirdly, they are more connected with

employees emotionally during major organizational change. Finally, middle managers maintain balance in an organization by harmonizing two distinct organizational phases namely, extreme stagnation and extreme chaos. All things considered, senior managers should give more importance to middle managers during organizational change and try to make them their allies. (Huy, 2001).

Dutton et al. (2001) elaborates the process of strategic issue selling in organizational context, i.e. how certain issues are brought to the notice of senior managers .by dint of carefully planned strategic moves. This moves were undertaken by people in an organization to bring about a major change. It is worth mentioning that 42 midlevel managers were questioned regarding the moves or strategies they undertook to gain attention of upper level managers towards an issue relevant to them.

The research revealed three main categories of moves namely packaging moves, involvement moves and process moves. Packaging moves involved presenting the issue in rational and logical format, almost in the form of business plans. Additionally it also involved bundling the central issue with other issues relevant to the organization or senior managers like profit, market share etc. Involvement moves typically identified suitable targets within the organizations relevant to drive the issue forward. Targets were both higher in rank and lower in rank and the “issue sellers” often formed allies with selected targets. Finally, process moves typically involved utilizing formal communication channels, acquiring sufficient knowledge about the issue before presentation and correct timing. Furthermore, issue sellers utilized three kinds of contextual knowledge, namely relational knowledge, normative knowledge and strategic knowledge to sell the issue. (Dutton et al.,2001).

Brown & Kathleen (1997) examine continuous change in six different firms in high velocity computer industry. To this end three main concepts are used to describe continuous change in organizational context namely, flexible structures, links in time and consecutive well sequenced steps. Flexible structure encompasses essential features of both structure and “unstructure”. In other words, it is unstructured enough to allow innovative futuristic change and structured enough to avoid chaos. Furthermore, links in time facilitates low cost enquiry into the future.

Experimental products and strategic alliances are some instances of low cost enquiry into the future. Finally, the present and the future are connected via well sequenced time paced process. It is quite interesting that Tarzan is used as a metaphor to describe the change process. To elaborate further, successful managers undertake moves similar to Tarzan. They swing on the current vine (semi-structure facilitates the swinging), look ahead for the next vine (enquire into the future) and finally make a smooth well sequenced transition between the two vines. (Brown & Kathleen,1997)

Strategic change should be managed in a holistic way taking into account both micro and macro aspects of change. It is quite evident that middle managers, supervisors and employees play important roles during transition process. The aforementioned protagonists often initiate, manage and drive change process. All things considered, there are four main concepts that needs to be considered. Firstly, change is more successful if the change process is more incremental, continuous and presented in a conservative packaging. Secondly, change process is never static but dynamic and cumulative. Thirdly, middle managers, not consultants and senior managers are the main protagonists of change and they undertake various strategic moves to initiate and drive change. Finally, semi structure is conducive to change and often facilitates change. Semi structure means a structure that is sufficiently concrete to avoid chaos and at the same time sufficiently flexible to allow innovation and change. (Huy, 2001; Dutton et al.,2001; Brown & Kathleen, 1997).

2.2.2.Organizational Design

Organizational design is a potent strategic management tool. There seems to be a consensus among scholars and practitioners that a good organizational design ensures alignment between strategy and structure, dismantles silos and facilitates cross boundary and cross disciplinary interaction and information flow. Furthermore, it also takes into account external business landscape. As an illustration an organizational design that is appropriate for high velocity industries might not be suitable for traditional mechanical industries.

Galbraith (2002) puts forward the proposition that current business landscape necessitates the need for customer centric/solution centric approach, amalgamation of products and services, and free flow of information and knowledge. Traditional organizations are usually designed with hierarchical structures that give rise to silos and inhibits free flow of information and

knowledge. Furthermore, traditional organizations are usually designed to be product centric and the transition to customer centric/solution centric units quite often proves to be a formidable challenge. Galbraith (2002) endeavours to address such challenges by focussing on various solution strategies that ascertains customer centricity as well as appropriate organizational structure. Besides, the significance of front- back hybrid organizational structure is emphasized with illustrative examples of IBM and Nokia.

Additionally, the star model has been developed further to fit the needs of solution centric organizations. The original star model aligns people, reward, process and structure with strategy. The solution centric star model necessitates the alignment of solutions fulfilment, product portfolio, team assembly processes, solutions development, and pricing with strategy. Furthermore, new paradigms are introduced to further expand the original model. In the new model, people encapsulates account managers, project managers with team player skills and conflict management skills, reward systems are designed considering company/customer-centric approach, processes typically deal with customer/solutions P&Ls. As a matter of fact, the overall organizational structure is designed to be flexible and customer centric.(Galbraith, 2002). In my opinion, the most challenging aspect of solution centric organizational structure is appointment of a CEO who “fits” the overall structure. Complex organizations with multiple customers, products and solutions invariably requires a CEO to be a team player, expert in conflict resolution, multitasking and at the same time potent enough to implement and manage the top down bottom up approach

The star model framework developed by Kates & Galbraith (2007) aids strategists in designing organizational structure by aligning strategy, reward, process, people and structure. The first step in organizational design is to identify organizational capabilities thereby aligning capabilities with overall strategy. As a matter of fact, the alignment process is facilitated to a great extent by employing the star model. The start model is basically a co-ordination tool that co-ordinates and aligns strategy, reward, process, people and structure with overall strategy. Furthermore, the significance of star model is further accentuated by contingency theory that proposes that organizational design is dependent on both strategy and business environment.

Furthermore, Kates & Galbraith (2007) elaborate various dimensions of traditional hierarchical organizational structures, thereby pointing out various deficiencies associated

with such structure. Consequently, the concept of “lateral connection” is introduced which is quite effective in overcoming “organizational barrier” and encapsulates network, teams, integrative role and matrix. Furthermore, various practises that facilitates lateral connection are enumerated. These practises includes but is not limited to encouraging interaction among employees with common interest, building relationship, work assignment rotation and employing technology to enable free flow of knowledge and ideas. (Kates & Galbraith , 2007).

Vertical organizational structures coupled with matrix overlays inhibits collaboration, cooperation and knowledge sharing, something that is indispensable for success in today’s high velocity environment. Furthermore, matrix structures often imposes multiple bosses upon a professional further complicating the knowledge sharing process. To ensure that professionals engender and exchange knowledge, it is important to re-design organizations in such a way that it facilitates cross-boundary interaction and dismantles silos. The new organizational model should be designed by taking four important factors into account. Firstly it should simplify line management process by disposing matrix structure if it is not suitable for organizations. Secondly it should re-design the management process to be more dynamic. Thirdly it should facilitate networking and information flow by setting up knowledge marketplaces. Finally it should ascribe more importance to performance measurement over full supervision. (Bryan, & Joyce, 2005).

Kellog et al. (2006) studied a marketing organization to analyse diverse practises that entities within the organization perform so as to transverse across their organizational silos, facilitate networking and information flow and engender a dynamic , flexible and emergent organizational structure.. They put forward the proposition that success in a dynamic landscape typically requires three things; rapid information flow, capacity to adapt and the capacity to collaborate horizontally. To this end, the members typically engage in specific “practises” to co-ordinate their activities in a rapidly evolving high velocity business landscape.

These practises gives rise to an organizational structure that facilitates new knowledge acquisition and adaption at an incredible speed. However, these practises also have negative repercussion; they prioritize speed over quality, corrode uniqueness and individuality, and give rise to vagueness and dubiousness thereby creating a stressful environment. Nonetheless,

information flow, adaption, and co-creation can be greatly accelerated by developing a “trade zone” framework. (Kellog et al.,2006)

As a matter of fact, the “trade zone” is a metaphor for a framework wherein diverse group of individuals with distinct values, interests and interpretation engage in “temporary relationship” by co-ordinating their activities and following certain general protocols that facilitates exchange of information and co-creation. Trade zone can be enacted by employing common “lexicon”, by engendering mutual and communal meaning, and by metamorphosing local knowledge by cross boundary co-creation. Furthermore, the overall structure of a trade zone is emergent, dynamic, flexible, constantly evolving and it invariably utilizes modern technology. As an illustration, technology like intranet, email, digital media etc. were commonly employed in Adweb to facilitate cross boundary information flow which signifies the importance of technology in trade zone. (Kellog et al., 2006)

On logical grounds, it seems fair to suggest that Kellog et al. (2006) and Kates & Galbraith (2007) essentially discuss about modern organizational structure. However Kellog et al. (2006) is more focussed on heterarchical structure typically found in high velocity industries and Kates &Galbraith (2007) discuss various dimensions of hierarchical organizational structure. Nonetheless, the concept of lateral connection (Kates & Galbraith, 2007) is quite similar to the concept of trade zone (Kellog et al., 2006) because both accentuate the significance of cross boundary interaction and knowledge transfer. The practises facilitating cross boundary interaction as advocated by the two articles is also quite similar. Both papers advocate engendering shared meaning and co-creation by connecting relevant people either physically or virtually by employing technology like intranet and email.

Nonetheless, the two papers also vary in certain important aspects. For instance, Kates & Galbraith (2007) advocates appointing a leader for orchestrating routinized cross boundary interaction. On the contrary, Kellog et al. (2006) propose a decentralized structure wherein accountability is delegated uniformly across all members of trade zone. Furthermore, Kates & Galbraith (2007) propose that people engaging in cross boundary interaction should have similar mental model and interests so that they ultimately comprehend and appreciate diverse perspectives. On the other hand, Kellog et al. (2006) suggest that people interacting in trade zone might have distinctly diverse interests and mental model and the relationship between such entities might be short term, lasting only during the exchange process.

All things considered, social capital is an important source of competitive advantage especially when VRIO framework (Barney & Wright, 1997) is taken into consideration. Social capital can be developed by designing an organizational structure that facilitates networking, co-operation, collaboration and knowledge sharing. Such organizational structure can be designed by trade zone enactment as well as by employing the star model framework. However, in my opinion the former will be more useful in case of heterarchical high velocity industry while the latter will be more relevant in traditional hierarchical industry.

2.2.3.Strategic Alliances and Partnerships

Fierce competition and evolving nature of business landscape have made strategic business alliance a necessary evil; indispensable for success for any business venture and at the same time a perfect recipe to cause disaster. Strategic alliance plays a critical role to the success of business objective. Besides, it also develops and reinforces a company's core competence. In addition, strategic alliance acts a barrier to threats from competitors, mitigates business risks and creates and sustains strategic choices. (Iveybusinessjournal.com, 2015)

Managing alliance invariably means managing factors that contributes to success of a business. To this end Prashant & Habir (2009) highlight several factors that contribute to success of strategic alliances. The first step in such ventures typically involves selecting the right partner. As a matter of fact, three important factors needs to be taken into account during partner selection ; a) the partners should complement each other with non-superimposable and non-overlapping resources/assets, b) the partners should be committed, c)the partners should "fit" or be compatible with regards to mental model, culture, perspectives etc.

Besides, the significance of equity based alliance for engendering commitment is emphasized. Once the alliance is formed, it is crucial to manage and co-ordinate such alliance and managerial efficacy has a direct impact on alliance life cycle. Well defined guidelines, clear roles, constant feedback and trust can lead to better co-ordination and alignment among alliance partners. Furthermore, experience, knowledge and constant learning can greatly

enhance alliance management capability. Besides, experience of one individual can be systematically synthesized into well-articulated guidelines that can be used as a “manual” by managers lacking experience. While it cannot be denied that alliance management is a complex and multifaceted task; however this complexity is taken to a new level when one considers portfolio alliance management. The latter typically requires multifaceted skills that involves alliance co-ordination, trust retention and conflict management across multiple partners. (Prashant & Habir , 2009).

The principles of alliance management laid out by Prashant & Habir (2009) can be utilized in modern solution centric organizations built around the framework of extended star model (Galbraith, 2002). It is because solution centrism, an integral aspect of extended star model (Galbraith, 2002), typically requires rapidly deployable teams or project groups that encapsulates diverse talents. Since the teams are assembled/disassembled rapidly in a high velocity environment and invariably amalgamates diverse talents, it is crucial that the team/project group members form and maintain “alliance”; absence of alliance might even lead to failure of entire projects. The nature of alliance is crucial here and in my opinion it is a portfolio alliance involving multiple relationship with multiple and heterogeneous partners.

Furthermore, customer centrism, a vital component of all modern organizations also requires that the company forms and maintains long term profitable relationship with customers. A customer centric/solution centric organization forms multiple alliance teams within the organization (project groups) as well as outside the organization in the form of long term relationship with high stake customers. (Galbraith, 2002), Therefore, it seems fair to suggest that in modern customer centric organizations, partner selection criteria as well as relationship management techniques should adhere to principles laid out by Prashant & Habir (2009)

2.2.4. Strategic Decision making under uncertainty

The uncertainty of business environment is increasing in an exponential manner thereby rendering decision making to be a complicated process. Kaplan (2008) elaborates how decision making process of managers is influenced by their cognitive framework. As a matter of fact, decision sellers typically endeavour to align cognitive framework of majority

in the organization with that of their individual cognitive framework. They achieve this with a series of deliberate interaction and manipulation.

Furthermore, cognitive framework is shaped to great extent by previous experience. For instance (Kaplan ,2008) cites the example of an engineer whose cognitive framework and past experience led him to adopt a “pro optical” mental model. Consequently he tried to align others with his personal cognitive framework in order to influence investment decisions in his favour. Moreover, individuals make sense of the external environment/business landscape by dint of their mental model which in turn shapes their decisions and strategy. Turbulent external environment often necessitates frequent realignment of mental model and cognitive framework. (Kaplan ,2008)

Besides, cognitive framework is not static but malleable, dynamic and constantly evolving and this evolution is shaped by experience and business landscape. Uncertainty in the external environment opens up possibility for enacting new framework and power structures. Frame contesters try to mobilize majority decisions in their favour by undertaking politically inclined framing practises. Skilful contesters succeed in aligning majority’s cognitive frame with their personal cognitive frame which then designs overall organizational framework and power structures. (Kaplan, 2008)

McAfee (2012) enumerates how decision making process besides being influenced by cognitive framework is also being revolutionized by availability of data and information technology As a matter of fact, the significance of managerial experience in strategy formulation is fading due to availability of modern technology. It is because business landscape is constantly evolving and relying solely on hunches and intuition based on past experience is not a smart strategy. Correct analysis of business environment requires accurate data based on current situation. However, “big data” should not be confused with analytics because it differs from analytics in three major domains; volume, speed of new data creation and variety.

A team of MIT scientists have collected conclusive evidence to prove that companies who effectively utilize big data perform better financially compared to companies who don’t. As an illustration, aviation companies are utilizing big data to estimate correct arrival time for flights thereby saving costs. Until now strategic decisions were generally undertaken by

highest paid senior executives based on their experience, intuition and hunch. However, big data is slowly replacing managerial experience and hunch. There is no doubt that big data will change the way important decisions are made and who makes them. Nevertheless, it does not eliminate the need for visionary leaders. Goal setting, delegation of tasks, defining success, managing and enhancing social capital and human resource will invariably require a visionary leader. (McAfee ,2012)

Courtney (1997) provides in-depth analysis of strategy formulation under uncertain conditions. To this end four levels of uncertainties are discussed. In the first level, the future is clear enough, residual uncertainty is negligible and a single strategic direction is sufficient. As an illustration, a major airline trying to analyse strategic directions to deal with entry of a low cost competitor is basically dealing with level 1 uncertainty. Level 2 involves more than one hypothetical scenarios and analysis at this level cannot identify with certainty the correct scenario that will materialise into reality. For instance companies facing changes related to legislations typically encounter uncertainty at level 2. At level 3 there are no discrete scenarios but a range of hypothetical scenarios with certain key variables. Companies pursuing expansion strategy in emerging economies typically face uncertainty at level 3. At level 4 termed as “true ambiguity”, interactions between multiple paradigms renders prediction to be an almost impossible feat.

At this level, strategists should avoid undertaking decisions based on intuition and past experience. Furthermore, strategists can resort to three different “postures” to deal with uncertainty. They can shape the game, they can adapt to the game or they can just reserve their right to play the game in future. Additionally, a company can resort to three different moves to solidify their strategic intent; a) big bet, (large commitment) b) options (to attain big bets if best case scenarios materialize and c) no regret moves (moves that secures pay off). At level 1, the company can act as shaper or adapter; however, at level 2, a shaping strategy is likely to increase the probability of success. Besides adapting, reserving the right to play is a common posture at level 3. At level 4, all players are uncertain of strategic outcomes and therefore acting as a shaper might prove to be a smart strategy. (Courtney,1997)

All things considered, strategic decision making under uncertainty is a very complex and risky process, nonetheless an inevitable one . While Kaplan (2008) focuses on cognitive

framework during decision making under uncertainty, McAfee (2012) elaborates how big data is revolutionising decision making process and Courtney (1997) presents various strategic moves that can be undertaken under different levels of uncertainty. It is quite evident that cognitive framework of managers/strategists plays a key role in strategy formulation.

However, an inherent weakness of cognitive framework is that it relies excessively on past experience and intuition. Nevertheless cognitive framework is malleable and a manager can deliberately alter personal as well as stakeholder's cognitive framework by utilizing big data, information technology and by analysing level of uncertainty and choice of strategic moves. Furthermore, big data and information technology can also be utilized to ascertain the level of uncertainty. To sum up, strategy formulation will be more effective when cognitive framework is moulded by big data, information technology and strategic postures.(Kaplan 2008; McAfee 2012; Courtney 1997).

2.2.5. Performance Measurement and Goal setting.

There exists an intricate link between performance measurement and goal setting and both play a significant role in success of strategy. In order to measure performance, goals should be pre-determined and set in advance. KPI's essentially measures progress towards pre-determined goals. Furthermore, it is very important to measure performance because it indicates progress towards pre-determined goals. By measuring performance, one can manage performance. Measuring performance sheds light on several important factors like success of corporate strategy, effectiveness of implementation plan related to strategy and gap between desired outcome and realized outcome. Good performance measures has several characteristics like it clarifies whether a strategy is materializing, focuses attention on drivers of success, measures tangible accomplishments, is a potent communication tool, mitigates uncertainty and measures right things. (Sinclair & Zairi,1995).

The balanced scorecard is a potent strategic management tool that facilitates performance measurement process. Used strategically it enables a company to utilize its intangible assets optimally. As a matter of fact, traditional financial measure often ignores vital issues related to customer satisfaction, learning and growth and internal business process. Balanced scorecard addresses all these issues in a holistic way and assists strategists in designing a

concrete action plan to attain the desired corporate goal. Furthermore, as a strategic management tool, the scorecard introduces important paradigms in four new dimensions ; deciphering the abstract vision into concrete action plan, conveying and linking, planning the business, and finally assessment and learning by collecting feedback. (Kaplan & Norton, 1996).

The first paradigm typically involves senior managers coming up with concrete goals and agreeing on means and ways of attaining those goals. Thereafter, the strategy is then communicated top down and there is also scope for bottom up feedback regarding practical implications of the strategy. Business planning is basically aligning the budget with the strategy for ensuring that resource allocation is optimal for attaining strategic goals. I found it quite interesting that the process of feedback and learning is termed as “double loop learning process” wherein appropriateness of assumptions and hypothesis related to strategy is tested in real time. Since business strategy is often implemented in a dynamically evolving landscape, it is quite common that the hypothesis and assumptions alter with time. This tool takes this important factor into account and provides scope for proactive alteration of strategy that is holistically connected with dynamic business landscape. (Kaplan & Norton, 1996).

Locke & Latham (2002) put forward the goal setting theory which is quite similar to social – cognitive theory ; both theories assign importance to “conscious goals” and “self-efficacy”. Furthermore, the goal setting theory conclusively elucidates various attributes of effective goal; the level of difficulty associated with the goal, the impact of the goal on individual, teams and organizations, the effective utilization of goal as a tool for learning or as a tool for performance measurement, mediators and moderators of goal etc. As a matter of fact, the main aim of goal setting theory is to explore various theories of motivation. In other words it mainly focuses on analysis of various factors that increases or decreases individual and group enthusiasm.

Goals can be used as a dynamic learning tool as well as a tool to measure and deliver performance. The two “goal tools” converge holistically when one considers “emergent” and “incremental” learning process (Mintzberg & Waters, 1985) that necessitates constant adaption of overall strategy based on feedback, learning and performance appraisal. Besides, Locke & Latham (2002) also list various factors that might lead to failure in attainment of pre-determined goals ; non-alignment of goal and measures of performance, lack of

commitment, lack of adequate feedback, lack of communication and information related to the assigned task, and finally setting too concrete, indisputable and concrete goals in a dynamic business landscape characterized by uncertainty.

However, Ordonez et al., (2009) develop the claim that goal setting has both beneficial and harmful effects and former is often over emphasized and the latter is completely undermined. As a matter of fact, the negative impacts of goal setting includes but is not limited to constricting and limiting focus, neglecting opportunities not related to goal, deviation from ethical conduct, risk aversion, degeneration of organizational culture and reduction in intrinsic motivation. Given that goal setting has negative repercussions, managers should reach a consensus on the extent of concreteness of goal setting and monitor its impacts in a holistic manner. In my opinion monitoring invariably necessitates collecting feedback and designing appropriate performance appraisal system which in turn will facilitate “incremental” and “emergent” learning process (Mintzberg & Waters, 1985) of senior managers. The negative impact of goal setting is further emphasized by citing the example of Ford motors’ Pinto. The CEO set specific goals regarding price, weight and market launch time of Pinto. These stringent pre – assigned goals completely neglected safety issues that eventually led to expensive law suits, 53 deaths and many injuries. On logical grounds, it is quite evident that stringent goal setting led to deviation from ethical standard and proved to be quite expensive for Ford Motors. (Ordonez et al., 2009).

All things considered, performance measurement and corporate goals plays an integral part in success of business strategy. Furthermore, resource allocation is also impacted by goals and the relative ease of goal attainment. Additionally resource allocation towards pre-determined goals is also impacted by middle managers initiative and enthusiasm and progressive learning process of top managers (Noda & Bower, 1996). The balanced scorecard facilitates performance measurement and goal setting process by introducing “double loop learning process” wherein appropriateness of assumptions and hypothesis is tested in real time. (Kaplan & Norton, 1996).

In the final analysis, while it cannot be denied that performance measurement and goal setting are important for success of business strategy, nonetheless managers should not overlook the negative effects of setting overtly static and concrete goals. Managers should consider adopting a flexible approach and set goals that are neither too concrete nor too

abstract, include middle managers and line managers at all levels of performance measurement and design structural and corporate context based on the principles of flexible structure (Brown & Kathleen, 1997). Furthermore, managers should constantly monitor, measure and manage goals and performance using appropriate tools like the balanced scorecard (Kaplan & Norton, 1996).

2.3.Elucidating Information Technology

Information technology can be defined as the sum total of all investment that a firm has made in assets like hardware, computing, software, communication technology and telecommunication. (Broadbent,1998). Information technology is a domain that deals with development, support, analysis and management of computer based information system that comprises of data, procedures, hardware and software.(Goles et al.,2008). Information technology comprises of various components like mechanical, human and conceptual whose primary function is to diffuse, transfer and accumulate data by utilizing digital devices. (Danziger & Andersen, 2002).

In the context of social work, information technology can be defined as utilization of data to codify and assign meaning to how humans do certain things. (LaMendola, 1987). Information technology draws from various diverse disciplines like science, technology, engineering and management to accumulate, manage, process and diffuse information and facilitate interaction between men, computers and machines. (Al-Mabrouk & Soar, 2009).

Information technology constitutes various technology that are used to acquire, handle and analyze information. Hardware and software systems are vital components of information technology. (Beukers et al.,2006). Information technology utilizes modern technology to retrieve, acquire, analyse, accumulate and transfer information. This information can be acquired and stored in various formats like numerical data, image, sound or text. (Carter, 1996)

2.4. IT- business alignment

Information technology or the competence offered by telecommunication, software and computers is redesigning business landscape. Traditionally IT played a supportive and administrative role within organizations , however the increasing complexity in business environment and rapid development of IT has empowered IT to play a strategic role that leverages and sustains organisational strategy. However alignment or fit between IT strategy and business strategy is very significant and both researchers and practitioners advocate such alignment. Strategic decisions undertaken in the domain of business impacts IT strategy and IT strategy can augment or debilitate business strategy . (Henderson & Venkatraman, 1993).

2.4.1.Elucidating alignment

Researchers have conceptualized alignment in various ways. Sauer and Yetton (1997) propose that alignment means managing IT in such a way that it follows management of the business in general. Alignment is the extent to which objectives and mission present in the business strategy are shared and reinforced by IT strategy.(Reich and Benbasat,1996). Henderson and Venkatraman (1993) define alignment as the extent of fit between business strategy and IT strategy. McKeen and Smith (2003) propose that strategic alignment ensures that a company's goals are in harmony with its information technology system. Luftman and Brier (1999) propose that alignment ensures application of IT in such a way that it is in agreement with business strategy.

2.4.2.Dimensions of alignment

Researchers have recognized various dimensions of alignment like strategic/intellectual, structural, social, and cultural. A brief description of various dimensions is as follows.

Strategic dimension : Strategic alignment ensures complementarity between business strategy, IT strategy, business plan and IT plan.(Chan & Reich, 2007). Kearns and Lederer (2000) propose that there should be a clear distinction between business plan and IT plan. Reich and Benbasat (1996) state that business-IT alignment requires that IT managers comprehend business strategy.

Structural dimension: It ensures structural fit between business strategy and IT strategy. To elaborate further it is influenced by decentralization of IT, decision making related to IT, and IT personnel. (Chan, 2002). Brown and Magill (1994) state that IT structure can be centralized, decentralized or hybrid. The IT structure should complement and reinforce the

business strategy. Furthermore, it is proposed that corporate strategy often influences IT structure. As an illustration, a firm following the strategy of unrelated diversification gave rise to a centralized IT structure. Tavakolian (1989) has provided conclusive evidence that proves that firm's strategy influences IT structure. For instance firms that pursue conservative strategy usually have centralized IT structure while risk averse firms with entrepreneurial strategy tend to have decentralized IT structure.

Social dimension : Social dimension of IT business alignment can be defined as the extent of understanding and commitment between business executives and IT executives towards IT and business plan, mission and goals. Collaboration between IT executives and business executives is an important pre-requisite for the alignment process. (Reich and Benbasat, 2000)

Cultural dimension : It is vital that business and IT align on cultural dimension. In essence cultural elements refers to business planning style and communication style.(Pyburn,1983). Alignment is mainly about cultural transition. (CIO Insight Staff, 2004). Chan (2002) states that a strong corporate culture gives rise to informal structure that is conducive for alignment. Tallon (2003) accentuates the importance of mind-set that endorses shared IT environment and common procurement policies. Van Der Zee and de Jong (1999) state that business and IT executives should use common language, terms and construct bridges to mitigate cultural difference between them. This will greatly facilitate the process of business –IT alignment.

2.4.3. Levels of alignment

Business IT-alignment should be present at all levels of organization like system level, individual level, organizational level etc. Alignment at individual level essentially means translating corporate objectives into personal goals.(Campbell, 2005). Alignment at project level ensures that project's deliverables is compatible with overall IT strategy and business strategy.(Jenkin and Chan, 2006). Alignment at cognition level signifies the importance of shared cognition between IT and business executives. High shared cognition usually translates to high level of alignment between business strategy and IT strategy. On the other hand, great variation at cognitive level gives rise to various problems during the alignment process. (Tan and Gallupe, 2006)

Henderson and Venkatraman (1993) propound that alignment should be achieved at both internal and external level. External alignment ensures that business and IT strategy are in harmony with industry and business landscape while internally IT strategy should be aligned

with infrastructures and organizational processes. Sledgianowski and Luftman (2005) state that during alignment organizations should extend their IT infrastructure externally to customers and suppliers. Galliers (2004) proposes that alignment should not be focussed only on internal environment but should impact and be impacted by external stakeholders like customers and suppliers.

2.4.4. Significance of IT-business alignment

Research has provided conclusive evidence that proves that organizations that align IT strategy with strong business strategy achieve and sustain growth and profitability. Information technology strengthens business strategy and aids strategists to become more analytical and future oriented by providing the required data, applications and software. Additionally the research has also revealed that strategically oriented organizations design and manage impeccable IT strategy. (Bergeron & Raymond, 1995). As an illustration Baxter Healthcare has partnered with IT firm IBM to re-design its business strategy with superior technology. (Henderson & Venkatraman, 1993).

Perfect alignment ensures that IT strategy leverages and sustains business strategy by managing various IT infrastructures and processes. Top managers formulate strategy and IT managers within organizations implement such strategies by dint of information service management within organizations. As a matter of fact, IT strategy can redesign business strategy by influencing new product and service decisions, aid the company in engendering distinctive competitive advantage, and help the company in managing business governance and business relationships more strategically. (Henderson & Venkatraman, 1993).

Information technology is often leveraged by leading corporations to reinforce and sustain business strategy. As an illustration, a well-known bank utilized information technology to create lock in customers by establishing high switch in cost. To elaborate further, the bank developed an e-banking system that required the customers to invest substantial amount of time to learn how it operates and code –in creditor information. Once the customer learnt how to use the system and creditor information was entered in the system, customers were reluctant to change banks. (Warren, 1984)

SME'S competing with bigger enterprises and corporations can attain competitive advantage by utilizing information technology strategically. (Dibrell et al.,2008). Currently the business landscape is dominated by hyper competition and increasing uncertainty. However relevant information can reduce uncertainty to a great extent and information technology aids corporations to acquire and manage strategic information. In other words increasing uncertainty in business world is increasing the need for relevant information because businesses use such information for decisions making and analysing multiple futuristic scenarios. (Karimi et al.,1996)

Many corporations depend on IT for various strategic decisions related to business strategy like marketing decisions, new product design decisions , investment decisions etc and IT managers in such companies simultaneously occupy the position of board of directors. In other words, senior managers in such companies are directly responsible for managing IT. (McFarlan et al.,1983).

Information technology can be an important source of competitive advantage. As a matter of fact companies often utilize information technology to create barriers to entry, switching cost and business process re-design. Information technology can change the way a company competes. As an illustration a well-known financial service firm made use of information technology to create a complex software package that added great value to firm. This highly valuable and complex software package could not be replicated by rivals and it created high switching cost for customers. Hence by utilizing information technology strategically this firm increased profit exponentially and increased market size and customer base. (Warren, 1984)

2.5.Summary

Strategy	Strategy essentially encapsulates a formula regarding the specific way a business will compete, its goals and the policies necessary to achieve those goals.
Key themes in Strategy	Strategic change Organizational structure re-design Strategic partnership Decision making under uncertainty Performance measurement and goal setting

Information Technology (IT)	Sum total of all investment that a firm has made in assets like hardware, computing, software, communication technology and telecommunication.
Alignment of IT strategy and business strategy	Alignment is the extent to which objectives and mission present in the business strategy are shared and reinforced by IT strategy
Dimensions of alignment	Strategic Structural Social Cultural
Levels of alignment	System Individual Organizational Internal External
Significance of alignment	Research has provided conclusive evidence that proves that organizations that align IT strategy with strong business strategy achieve and sustain growth and profitability.

Table 1 : Summary of literature review

It is a complex task to elucidate what strategy exactly means given that different scholars have defined strategy differently and its quite challenging to find a single definition of strategy that fits all cases. However, in the field of business, Porter's definition of strategy is widely acceptable. According to Porter (2008,24) a competitive strategy essentially encapsulates a formula regarding the specific way a business will compete, its goals and the policies necessary to achieve those goals. In essence competitive strategy consists of goals and policies that materialize those goals. Furthermore, the literature review has provided important insight on current strategic themes related to business like strategic change, organizational structure re-design, strategic partnership, decision making under uncertainty and performance measurement and goal setting.

All things considered, there are four main concepts that needs to be taken into account during strategic change. Firstly, change is more successful if the change process is more incremental, continuous and presented in a conservative packaging. Secondly, change process is never static but dynamic and cumulative. Thirdly, middle managers, not consultants and senior managers are the main protagonists of change and they undertake various strategic moves to initiate and drive change. Finally, semi structure is conducive to change and often

facilitates change. Semi structure means a structure that is sufficiently concrete to avoid chaos and at the same time sufficiently flexible to allow innovation and change. (Huy, 2001; Dutton et al.,2001; Brown & Kathleen, 1997). Furthermore, organizational design is a potent strategic management tool. There seems to be a consensus among scholars and practitioners that a good organizational design ensures alignment between strategy and structure, dismantles silos and facilitates cross boundary and cross disciplinary interaction and information flow. The star model framework developed by Kates & Galbraith (2007) aids strategists in designing organizational structure by aligning strategy, reward, process, people and structure. The first step in organizational design is to identify organizational capabilities thereby aligning capabilities with overall strategy.

Besides, social capital is an important source of competitive advantage especially when VRIO framework (Barney & Wright, 1997) is taken into consideration. Social capital can be developed by designing an organizational structure that facilitates networking, co-operation, collaboration and knowledge sharing. Such organizational structure can be designed by trade zone enactment, (Kellogg et al., 2006) facilitating lateral connection (Kates & Galbraith, 2007) and by employing the star model framework.(Kates & Galbraith ,2007)

Besides, strategic alliance is becoming a critical factor to the success of business strategy. Furthermore, customer centricism, a vital component of all modern organizations also requires that the company forms and maintains long term profitable relationship with customers. A customer centric/solution centric organization forms multiple alliance teams within the organization (project groups) as well as outside the organization by initiating and nurturing long term relationship with high stake customers. (Galbraith, 2002).

In addition, strategic decision making under uncertainty is a very complex and risky process, nonetheless an inevitable one . While Kaplan (2008) focuses on cognitive framework during decision making under uncertainty, McAfee (2012) elaborates how big data is revolutionising decision making process and Courtney (1997) presents various strategic moves that can be undertaken under different levels of uncertainty. However, an inherent weakness of cognitive framework is that it relies excessively on past experience and intuition. This weakness can be overcome by leveraging information technology.

Performance measurement and goal setting are intricately linked with each other and plays a significant role in success of strategy. In order to measure performance, goals should be pre-determined and set in advance. KPI's essentially measures progress towards pre-determined goals. (Sinclair & Zairi,1995). While it cannot be denied that performance measurement and goal setting are important for success of business strategy, nonetheless managers should not overlook the negative effects of setting overtly static and concrete goals. Managers should adopt a flexible approach and set goals that are neither too concrete nor too abstract, include middle managers and line managers at all levels of performance measurement and design structural and corporate context based on the principles of flexible structure (Brown & Kathleen, 1997)

Information technology can be defined sum total of all investment that a firm has made in assets like hardware, computing, software, communication technology and telecommunication. (Broadbent,1998). Information technology is a domain that deals with development, support, analysis and management of computer based information system that comprises of data, procedures, hardware and software.(Goles et al.,2008).

Traditionally IT played a supportive and administrative role within organizations , however the increasing complexity in business environment and rapid development of IT has empowered IT to play a strategic role that leverages and sustains organisational strategy. However alignment or fit between IT strategy and business strategy is very significant and both researchers and practitioners advocate such alignment. Strategic decisions undertaken in the domain of business impacts IT strategy and IT strategy can augment or debilitate business strategy . (Henderson & Venkatraman, 1993).

Researchers have conceptualized alignment in various ways. According to Reich and Benbasat (1996) alignment is the extent to which objectives and mission present in the business strategy are shared and reinforced by IT strategy. Furthermore, researchers have recognized various dimensions of alignment like strategic/intellectual, structural, social, and cultural. While strategic alignment ensures complementarity between business strategy and IT strategy (Chan and Reich, 2007), structural dimension ensures structural fit between business strategy and IT strategy. To elaborate further it is influenced by decentralization of IT, decision making related to IT, and IT personnel. (Chan, 2002). Social dimension of IT business alignment can be defined as the extent of understanding and commitment between

business executives and IT executives. (Reich and Benbasat,2000). In essence cultural elements refers to business planning style and communication style.(Pyburn,1983). Furthermore, business IT-alignment should be present at all levels of organization like system level, individual level, organizational level etc.(Campbell, 2005 ; Jenkin and Chan 2006 ; Tan and Gallupe 2006)

The main focus of this thesis is to deduce how major IT consultancy firms align IT strategy with business strategy so as to reinforce and sustain business strategy. Therefore the main focus of this thesis will be to identify key themes within strategic IT services offered by case companies to sustain and reinforce business strategies. Additionally the thesis also aims at identifying how the case companies describe IT strategy to potential clients because this description will ultimately elicit client's interest and motivation in business-IT alignment. In other words, the case companies portrayal of IT strategy will ultimately motivate clients to acquire and align IT strategy with business strategy. The secondary focus of this thesis will be to study the case companies comprehension and approach towards strategic themes related to IT strategy and how they diverge and converge from each other.

3. Research methodology

A qualitative multiple case study was conducted for the purpose of this thesis. The case companies chosen for the purpose of case study were Accenture headquartered in Dublin, Europe, Tata Consultancy Services headquartered in Mumbai, Asia, and Cognizant Technology Solutions headquartered in Teaneck, NJ, North America. Research data for this thesis was collected from various secondary sources like case companies websites, annual reports, white papers and other publicly available official materials published by case companies.

Broadly speaking the empirical section consists of three main parts. The first part comprises of description of case companies elucidation of IT strategy to potential clients. In my opinion elucidation of IT strategy to potential clients plays a significant role in influencing clients to purchase and align IT strategy with business strategy. The second part focuses on thematic content analysis of various strategic IT services offered by case companies to sustain and reinforce business strategies. The final part comprises of cross case analysis of three case companies. The cross case analysis is an endeavour to elaborate how the companies

comprehension and approach to strategic themes related to IT strategy diverge and converge from each other.

Qualitative research is potent tool to comprehend reality in specific context, namely socio-cultural context. Quantitative research has various shortcomings in analysing phenomenon involving social and cultural aspects. For instance, if the researcher undertakes the standpoint of a social constructivist and studies sense making or subjective experience of research subjects, quantitative research will fail miserably in analysing such socio-psychological phenomenon. Broadly speaking, qualitative research can be subdivided into four main parts; discourse analysis, case study research, ethnography, and reflective phenomenology. The main sources of data in qualitative research are interviews, observations or written documents (Eriksson & Kovalainen 2008, 4-6). Since my thesis is mainly based on discourse analysis of publicly available written documents, it was a logical decision on my part to choose qualitative research methodology.

Epistemology probes the nature of knowledge, the way its created and its limitations and it can be further classified into three main sub- classes ; Empirism or positivism which states that reality is composed of concrete material things that can be easily observed, subjectivism which views reality as a socially constructed phenomenon and finally critical realism which acknowledges the existence of material reality but also proposes that different people interpret and experience reality differently due to difference in their subjective experience. Broadly speaking, methodology can be subdivided into qualitative and quantitative research methods. Furthermore, if we take precision into account methodology can also be subdivided into grounded theory, ethnography and case study. (Eriksson & Kovalainen 2008, 11-24). My philosophical stance is that of critical realist because I firmly believe that discourses are interpreted and comprehended differently by different people due to differences in their mental model and socio-cultural background. This thesis will mainly present my subjective interpretation of case companies' discourse related to IT strategy.

3.1. Case study

After analysing my research questions and context it was quite evident that multiple case study will be the most appropriate methodology for my thesis. As pointed out by Yin (2013) there are certain situations when case study methodology is particularly suitable and has

distinct advantage over other methods. I believe that in my case, case study methodology definitely has advantage of other methods. To elaborate further case study is the most appropriate methodology when the researcher is examining a series of events over which he/she can exert little or no control. . (Yin, 2013).

In essence case study sheds light on a decision or series of decision, the logic behind why such decisions were undertaken and the final outcome of such decisions. Furthermore, case study is also particularly suitable when three main conditions are met; firstly when the research question mainly focuses on “how” question, secondly the researcher has no control over the series of events that he/she is studying, and finally when the researcher analyses current phenomenon using historical phenomenon as theoretical framework. (Yin, 2013).

All conditions forwarded by Yin(2013) hold true in case of my research, therefore I have chosen case study methodology. To elaborate further, I will analysing discourses that has already been published and I will have no control over those discourses because they have already been documented by chosen case companies. In addition, my research questions essentially focuses on “how” questions related to case companies. Moreover I will be studying current discourses by utilizing past academic literature as theoretical framework. Since all conditions forwarded by Yin(2013) are fulfilled in this case, I believe that case study is definitely the most appropriate methodology for my research .

Case study research is becoming quite popular in the context of business research due to its holistic and practical approach (Eriksson & Kovalainen, 2008) and since my research essentially revolves around business strategy, I firmly believe that case study is most suitable methodology in this case. I want to present complicated and intricate business phenomenon and concepts in easily comprehensible way that will be easily understood by business leaders, students and managers. Additionally, I do not want to undermine the importance of idiosyncrasy of individual cases .

Case study will greatly help me in this regard because within - case analysis will help me to study the idiosyncrasy of individual cases. Additionally, since I want to adopt a down to earth and practical approach, case study is definitely the most suitable methodology for me. As pointed out by Eriksson & Kovalainen (2008, 115 -137) case study appeals to managers and business students particularly due its down to earth and real life approach. It is because case study research presents holistic view of reality by analysing numerous and multiple sources.

Typically case study utilizes data from multiple sources like interviews, questionnaires and observations. Case study can be used to accomplish various goals like providing description, testing theory or even producing new theory. The first phase in this approach is to define the research question accurately. It is a good idea to specify various constructs that can actually aid in research design. .(Eisenhardt, 1989).

As an illustration, researchers studying decision making in top management team identifies various constructs like conflict, power etc. To elaborate further, the researcher should begin by identifying the research problem, important variables and its relation to extant literature. However, too much of specificity regarding theories and variables should be avoided at this stage. Furthermore, selection of appropriate cases and appropriate methods is very important because it sets limits to extent of generalization of research. .(Eisenhardt, 1989).

Besides case study research can utilize qualitative data, quantitative data or combine both data sets to arrive at final conclusion. Analysing data for case study is the most complicated aspect of the overall process. One way to simplify this process is to treat each case as a singular entity. This helps the researcher to analyse the unique features of each case in a holistic manner before searching for patterns or general ideas in all cases. While searching for cross-case patterns the researchers should analyse data from multiple dimensions so as to overcome the biases involved in information processing. As a matter of fact humans have a tendency to reach final conclusion abruptly with insufficient data and in such cases the conclusion is usually wrong. This limitation can avoided by selecting pairs of cases and then analysing disparity and similarity within selected pairs.(Eisenhardt, 1989).

Piekkari et al. (2008) have proposed that case study is a holistic approach that bridges the gap between positivists and constructivists. Since I have undertaken the stance of critical realist, I believe case study is quite appropriate choice in my case. Infact Piekkari et al. (2008) have pointed out that critical realists often resort to case oriented case study approach so my methodology is aligned with my onto-epistemological stance. Initially the prominent researchers in case study like Eisenhardt and Yin took a positivist standpoint, however this approach has been challenged.

Positivists and constructivists often define case study differently. Piekkari et al. (2008) endeavour to bridge this gap by putting forward a holistic definition of case study. Case study can be defined as a strategy that utilizes multiple data sources to study a phenomenon in the backdrop of naturalistic context. Since I am studying the phenomenon of business –IT

alignment against a backdrop that I cannot manipulate or re-create and I am relying on multiple data sources (whitepapers, annual reports, case companies website etc.) case study methodology is well justified choice in this case.

Additionally, since case study research is essentially qualitative due to richness and variety associated with such cases, I have chosen qualitative research methods. Furthermore, complex organizational, managerial and business phenomenon cannot be studied appropriately with quantitative research methods due to several limitations associated with such methods. (Eriksson & Kovalainen 2008, 115 -137). Since I am studying complex business phenomenon and I want to present thick , holistic and in depth description of my research findings, qualitative case study is definitely the most appropriate methodology in my case.

I want to study and describe the phenomenon of business -IT alignment holistically. For this purpose I will utilize data from multiple secondary sources like academic literature and publications, business journals and reviews, websites and annual publications of chosen case companies. Therefore case study research is quite appropriate in my case because case study can be used to accomplish various goals holistically like studying phenomenon, providing description, testing theory or even producing new theory by utilizing data from multiple sources. (Eisenhardt, 1989).

.Additionally, I have chosen multiple case study methodology because the data derived from multiple cases is rich, varied and extensive and will help me in studying and identifying underlying patterns related to strategic moves. My research is likely to be labelled as extensive case study research because I will study and compare multiple cases and my main aim will be to map common underlying pattern and themes present in all cases. To elaborate further, I am not specifically interested in individual cases per se; the cases are instruments that will help me study business phenomenon related to strategic processes and practises of leading international management consultancy firm. In the final analysis, multiple qualitative case study is the most appropriate methodology for the purpose of my research.

3.2.Case Companies

For the purpose of case study, I have chosen three IT strategy consulting firms headquartered in three different continents. The chosen case companies are market leaders and dominant players in their respective continents and possess in-depth knowledge and expertise in

business-IT alignment. They are Accenture headquartered in Dublin, Europe, Tata Consultancy Services headquartered in Mumbai, Asia, and Cognizant Technology Solutions headquartered in Teaneck, NJ, North America. The rationale behind my choice is that in the domain of IT consulting, these three companies stand out from the crowd because of their reputation, expertise in business –IT alignment, client base, quality framework and highly trained consultants. These three companies possess a global client base comprising of world's leading companies. Additionally these companies have a strong network of alliance with global players like Microsoft, Google, IBM, HP etc. Furthermore, these companies are trailblazers in developing innovative technology that few competitors can match. Besides these three companies have consistently acquired high rankings in global ranking of IT strategy consulting firms.(Vault.com, 2015).

Accenture has been consistently ranked as the best firm in the world for strategic IT consulting. It also occupies high rank in Fortune Global 500 list. Accenture is one of the pioneers in offering IT- business alignment services. To elaborate further, during late 1980's Accenture started offering special services for business integration that focussed on aligning IT, processes and people with business strategy. Besides, Accenture is the largest IT strategy consulting firm in the world. It has extensive network with world's leading companies, NGO's and governments. Accenture's clients and partners include 91 of the Fortune Global 100 companies and more than 75% of Fortune Global 500 companies. Accenture has more than 200 offices across 54 countries. Besides IT strategy consulting, Accenture is also actively engaged in academic research related to current business challenges and strategies to overcome such challenges. The research papers and reports produced by Accenture has been published in leading business magazines and newspapers like Financial Times, Harvard Business Review and The New York Times. Additionally Accenture also publishes well renowned business journals like Outlook and Point : the prime focus of these journals is to discuss about innovative business strategies. (Accenture Company Profile, 2015).

Tata Consultancy Services (TCS) is a global player in offering strategic IT services related to business solutions. Though the firm offers various services like technology consulting, engineering and security consulting, management services etc, the core services of the firm revolves around developing specially customized software packages for businesses. In other words, TCS develops innovative IT solutions for business related to Finance, accounting, marketing, HR etc. (Tata Consultancy Services Company Profile, 2015). Among all IT consulting firms headquartered in Asia, TCS employs highest number of best trained

consultants. In July 2015, the number of consultants employed by TCS stood at 319,000 . (TCS: Corporate Facts, 2015). TCS is the first company in the world to receive enterprise-wide maturity level 5 on CMMI and P-CMM assessment for Services and Development, the highest appraisal for quality framework. Additionally TCS is the first IT firm to be assessed at this level and indeed a trailblazer in setting a new benchmark for quality framework. (TCS sets new benchmark in Quality, 2015). In June 2015, Forrester wave declared TCS to be a market leader in Asia Pacific due to the following reasons : rapid growth and investments in the region, expertise and experience in business transition services, involvement in innovative and complex technology and business projects and for achieving highest ranking in customer satisfaction among all IT companies in the report. (TCS News & Events: Press Release, 2015).

Cognizant is one of the leading companies in the world offering strategy consulting services related to IT and business. As a matter of fact, it is one of the fastest growing IT consulting firms in the world with a wide and diverse base of clients. . The company has been featured consistently and consecutively in many international and well renowned lists like Fortune's most admired companies, Information Week's Elite 100 , Fortune 500 , Financial times 500 and Forbes Global 2000 list. Client base comprises of leading companies from banking and finance, healthcare, media, retail and consumer goods etc. The core services offered by the firm revolves around strategies related to business –IT alignment. Cognizant was featured in Fortune magazine's most admired companies in the world list for 6 years in a row. In 2014, IDC MarketScape declared Cognizant to be a Leader in IT and business process outsourcing services across the entire life sciences value chain. In 2013, FinTech listed Cognizant among top 5 global financial technology providers. Cognizant has consistently occupied high rank in FinTech list for eight consecutive years. (Cognizant Company Profile, 2015)

Given the strategic significance of the abovementioned IT consulting firms, it was a rational decision on my part to choose these companies for the purpose of my case study. There is no doubt that these companies are trailblazers and market leaders in their respective continents. Additionally, these companies possess in-depth knowledge, experience and expertise in strategies related to business-IT alignment. Their expertise and knowledge in business IT alignment has been acknowledged by leading business magazines and research firms like Financial Times, Harvard Business Review, Forrester Wave, FinTech etc. Since my main

objective in this thesis will be to study business-IT alignment, naturally the chosen companies are perfect for the purpose of my case study.

Furthermore, according to purposeful sampling design strategy, cases are selected because they are rich in information and illuminate important facts. In other words the cases manifest important information and insights about a phenomenon of interest and are not merely related to empirical generalization. (Patton, 2014). The chosen case companies are rich in information and provide important insights about an interesting phenomenon, namely business-IT alignment.

3.3. Research process

I commenced the research process by developing the central research question related to business-IT alignment. Thereafter I familiarized myself with various academic literatures related to strategy, IT and strategies related to business-IT alignment. As I acquainted myself with relevant literature related to my central thesis question, it dawned upon me that although there is no dearth of academic literature related to my central question, nonetheless I did not come across any appropriate literature that explained how major IT consultancy firms elucidate IT strategy to clients that ultimately elicits client's interest in business –IT alignment. Additionally, I also identified a research gap related to key themes within strategic IT services offered by major IT consultancy firms to sustain and reinforce business strategies. This led to formulation of my first two research questions . The third question was a natural progression from the first two research questions.

After the research questions were formed, I proceeded to select appropriate methodology for the purpose of my research. Considering the nature of my research questions, it was quite evident that qualitative multiple case study would be the most appropriate methodology in this case. To elaborate further, case study is particularly suitable when three main conditions are met; firstly when the research question mainly focuses on “how” question, secondly the researcher has no control over the series of events that he/she is studying, and finally when the researcher analyses current phenomenon using historical phenomenon as theoretical framework. (Yin, 2013).

All these conditions are fulfilled in case of my thesis and hence case study seemed to be the most appropriate methodology. Thereafter I had to choose between qualitative and quantitative method. As pointed out by Eriksson & Kovalainen (2008, 115-137) complex organizational, managerial and business phenomenon cannot be studied appropriately with quantitative research methods due to several limitations associated with such methods. Since my research revolves around complex business phenomenon and I want to present thick, holistic and in depth description of my research findings, I realized that qualitative case study is definitely the most appropriate methodology in my case.

After finalizing the research methodology, I focussed on collecting data for my thesis. At this phase I had two choices regarding data: primary data and secondary data. However it became quite clear to that it would be impossible for me to accumulate primary data in this case. To elaborate further, scheduling interviews with influential IT consultants working for the leading case companies that I have chosen was impractical and non-viable. Furthermore the nature of my research questions is such that all relevant data could be easily accumulated from secondary sources. After initial desk research it became evident that there is no dearth of well documented and reliable data secondary data. Therefore I decided to rely on secondary data for the purpose of my thesis.

3.3.1.Data collection

The research data was accumulated during course of six months from relevant secondary sources. The data collection process commenced during December 2014 and was finalized during May 2015. I also ensured that my data is up to date by reviewing all data at the end of the process. I commenced the data accumulation process by familiarizing myself with the case companies official websites and their general content. After I was familiar with general content presented in case companies website, I started searching and accumulating data specifically related to IT strategy and business-IT alignment. Precisely speaking I restricted my focus in accumulating only those data that explicitly dealt with IT strategy for reinforcing business strategy.

I began with Accenture's official website and familiarized myself with data related to IT strategy and IT-business alignment. I also explored various white papers, research findings, annual reports and press release published by Accenture related to IT-business alignment. All such reports and papers were directly hyperlinked in Accenture's official website. I

repeated this process for other case companies, namely TCS and Cognizant. It is important to mention here that in case of Accenture, in addition to data from official website, I also explored and accumulated data from various articles published in the official website of Accenture Academy.

I relied on secondary data for the purpose of my research because it was quite evident that it would be impossible for me to accumulate primary data in this case. To elaborate further, scheduling interviews with influential IT consultants working for the leading case companies that I have chosen was impractical and non-viable. Furthermore, I did not want to interview just any random inexperienced consultant because it might have a negative repercussion and divert me from real facts. Besides IT consultants are bounded by secrecy clauses and seldom divulge confidential data publicly, so even if I were able to schedule an interview with top tier IT consultants, I would have only received “refined and polished truth” and such refined truth is already publicly available on their website.

Furthermore the nature of my research questions is such that all relevant data could be easily accumulated from secondary sources. The data that I required from my research are well documented in case companies official website. In view of these issues I decided to adopt a pragmatic and realistic approach and decided to utilize publicly available well documented secondary data for the purpose of my research. After initial desk research it became evident that there is no dearth of well documented and reliable data; such data can be easily accumulated from websites of the chosen case companies, leading business magazines and journals like Forbes, Harvard Business Review, Business insider etc.

3.3.2.Data Analysis

The data analysis process proceeded in two steps. Firstly I conducted within case analysis of individual case companies which was followed by cross-case analysis of all three case companies. To elaborate further I began the process by analysing each case separately (within case analysis). After the completion of within case analysis I conducted cross case analysis wherein I compared the cases and searching for similarities and differences between them. In other words during cross case analysis I mainly focussed on synthesizing, comparing and scrutinizing important themes that are present in all cases under study

Furthermore, during data analysis process I employed important strategies as pointed out by (Eriksson & Kovalainen 2008, 115 -137). To elaborate further I utilized theoretical propositions, coding and case description that acted as a guiding points for me during the analysis process. Additionally I endeavoured to perceive and synthesize underlying pattern that could be detected directly from accumulated data. During this process I was open to the idea that emerging pattern might not be related directly to existing theories. In my opinion analysing data for multiple cases is the most complicated aspect of the overall process. I tried to simplify this process by treating each case as a singular entity first. This helped me in analysing the unique features of each case in a holistic manner before searching for patterns or general ideas in all cases. While searching for cross-case patterns I analysed data from multiple dimensions so as to overcome the biases involved in information processing.

During analysis process my main focus was to search for underlying pattern or specific themes that are prominent and could be detected directly from accumulated data. I commenced the data analysis process with within case analysis of Accenture and read through accumulated data multiple times and searched for specific themes and underlying pattern. I noted down prominent themes and emerging pattern in my notebook under suitable heading. This was followed by within case analysis of Tata Consultancy Services (TCS) and Cognizant. After I had noted down all prominent themes and underlying patterns related to all three case companies, I started cross case analysis. During cross case analysis I compared the prominent themes and patterns that emerged from all three case companies. During this phase my main aim was to search for prominent themes that connected or differentiated the case companies. During this phase I also formulated mind maps to connect key ideas, patterns and themes across all case companies.

I conducted the thematic content analysis in several steps. I commenced the process by reading through the data several times to make myself well acquainted with the data and to search for emerging patterns. Next I started generating initial codes to categorize data into distinct groups. I developed seven distinct codes, C representing change, O representing organizational structure, P representing partnership, D for decision making, PR for predictive analysis, PA for performance appraisal and G for goal setting. Thereafter I went through the data again and coded all relevant data. Next I started combining the codes into specific themes that depicted the data accurately. At this phase, five overarching themes emerged, strategic change, organizational structure re-design, strategic partnership, decision making under uncertainty and performance measurement and goal setting. Thereafter I read through

the data again to ensure that the themes are supported by the data and depicts the data accurately. Finally, I realized that the themes will make meaningful contribution to my research and hence I finalized the themes.

It is worth mentioning that throughout my research I adopted an iterative and abductive methodology. To elaborate further, I familiarized myself with theory related to my research before commencing my research process. However, after accumulating relevant data and coding data, I referred to relevant academic literature again that was related to accumulated data. As an illustration, after coding and finalizing themes related to decision making and predictive analysis I referred to academic literature related to decision making under uncertainty and included it as part of my literature review.

3.4. Research Validity and Reliability

I employed the four tests method designed by Yin (2013, 45-49) to establish validity for my research concerning case study of chosen case companies. Yin (2013,45-49) has put forward four tools or four tests that can be used by qualitative researchers to analyse and demonstrate the quality of their work. The first test is construct validity and its utilizes multiple sources of evidence and establishes link between various sources during data collection phase. The second test, internal validity matches pattern, develops credible explanations, takes opposing explanations into account and relies extensively on various models of logic. The second test is conducted during data analysis phase. The third test is external validity, usually used in research design phase and makes use of theory in single case studies and logic of replication for multiple case studies. The final test is reliability, employed during data collection phase and involves building a database for case study and employs various case study protocols.(Yin2013, 45-49.)

I followed the framework designed by Yin (2013, 45-49) and I began my research by familiarizing myself with academic literature and business journals related to strategy and strategic moves. Furthermore I exerted extra caution at all phases of research and avoided making steep generalizations and assumptions in the absence of concrete evidence that supports such assumptions. Finally I formed a data base for case study and stored all data systematically in multiple locations like note book, email, word files and cloud storage device.

Researchers with positivist epistemology adhere high importance to reliability. Reliability of research is established if the research results are unchanging and consistent over time, accurately represent the sample and can be easily reproduced by researchers employing a similar methodology. (Golafshani, 2003). In other words, a research is reliable if the observations can be replicated and repeated under similar methodology. It is worth mentioning that my research is based on publicly available data. In principle this means that anyone can confirm the facts by accessing the data and by replicating the study. The observations presented in this thesis can be easily replicated and reproduced by researchers employing similar methodology.

3.5.Ethics

There are two main dimensions of research ethics, procedural ethics and ethics in practise. The former involves seeking approval and consent of research committee if the research involves humans as research subjects and the latter deals with practical day to day issues that arises during the research process. (Guillemin & Gillam, 2004). Since my research does not involve any human subject, procedural ethics is obsolete in this case. However, for day to day ethical issues or ethics in practise I adhered to European Code of conduct for research integrity (European Code of conduct, 2015). In practise this means I adhered to principles of honesty, objectivity, reliability, impartiality, and fairness in acknowledging contributions of other researchers. Furthermore I also followed good research practises like storing all research data in well documented form that can be easily accessed. Besides I exerted utmost caution to avoid negligence and carelessness and ensured that my behaviour is responsible at every phase of research

4. Research Findings and Discussions

This chapter focuses on research findings and discussion. The chapter commences with brief introduction of the case companies. It is followed by description of case companies elucidation of IT strategy to potential clients. In my opinion elucidation of IT strategy to potential clients plays a significant role in influencing clients to purchase IT strategy with the

objective of business-IT alignment. Thereafter I conduct a thematic content analysis of various strategic IT services offered by case companies to sustain and reinforce business strategies. The final part comprises of cross case analysis of three case companies. The cross case analysis is an endeavour to elaborate how the companies comprehension and approach to strategic themes related to IT strategy diverge and converge from each other.

4.1.Case Companies

In the arena of IT consulting, three companies have emerged as undisputed leaders and trailblazers because of their reputation, client base, expertise and knowledge in business-IT alignment, quality framework and highly trained consultants. They are Accenture headquartered in Dublin, Europe, Tata Consultancy Services headquartered in Mumbai, Asia, and Cognizant Technology Solutions headquartered in Teaneck, NJ, North America.

4.1.1.Accenture

Accenture is a leading global player in IT strategy consulting sector. Their core services revolve around consulting, strategy , digital and technology. Their mission is to help organizations achieve their mission by maximizing their performance. Accenture has consistently occupied high rank in Fortune’s “world’s most admired companies” for 12 consecutive years. Accenture’s success story started 60 years ago. In early 1950’s the company was a pioneer in the world of information technology. Today Accenture is one of the industry leaders in Fortune Global 500 companies.(About Accenture, 2015)

In 1951, Joseph Glickauf a manager in Administrative services invented the “Glickiac” computer and influenced partners to invest in technology. This led to installation of first computer for commercial use at GE Appliance park. In 1969, Bill Ingersoll became head of administrative services and continued investments in technology and data system. In 1969, the system integration project was launched, the first of its kind for accessing online data utilizing cathode rays tube. In 1972, Lexicon was developed by the firm, the first computerized data dictionary for business computer system. (Timeline, 2015)

In 1979, METHOD/1 was launched, a structured approach for information design, planning and support. By this time, Administrative services had gained reputation for consultation services and thereby renamed as Management Information Consulting Division. In 1985, the “just in time” manufacturing concepts were introduced by the firm that received wide acclamation in the business world. In 1989, the firm introduced and endorsed the business integration model for clients that ensured total alignment between technology, process

people and strategy. In 1990, the firm launched Outlook magazine that mainly focussed on change management and thought leadership. In 1992, the firm launched Horizon 2000 strategic planning process. (Timeline, 2015)

The firm became one of the pioneers in electronic sharing of information by launching Knowledge Xchange in 1993. In 1994, various centres for strategic technology were set up in Palo Alto, California, and Sophia Antipolis, France. Today these centres are known as Accenture Technology Labs and are hub for technological innovation. In 1998, the firm launched Horizon 2010 strategic planning initiative for developing innovative strategies for new millennium. In 2000, the company was renamed as Accenture meaning "accent on the future". The idea for this new brand name was suggested by Kim Petersen, a Norwegian employee. In 2002 Accenture was listed in FORTUNE Global 500 companies for the first time. In 2004, Accenture was featured in Forbes Global 2000 list and Financial Times' FT 500 for the first time. In 2008, Accenture appeared in Ethisphere Institute's "World's Most Ethical Companies list. In 2012, Accenture was included in well renowned S&P 100 Index. (Timeline, 2015)

Today, Accenture is the largest IT strategy consulting firm in the world. It has extensive network with world's leading companies, NGO's and governments. Accenture's clients and partners include 91 of the Fortune Global 100 companies and more than 75% of Fortune Global 500 companies. Accenture has more than 200 offices across 54 countries. Besides IT strategy consulting, Accenture is also actively engaged in academic research related to current business challenges and strategies to overcome such challenges. The research papers and reports produced by Accenture has been published in leading business magazines and newspapers like Financial Times, Harvard Business Review and The New York Times. Additionally Accenture also publishes well renowned business journals like Outlook and Point : the prime focus of these journals is to discuss about innovative business strategies. (Accenture Company Profile, 2015).

4.1.2. Tata Consultancy Services (TCS)

TCS is among leading global players that offers IT and digital services for business. Brand Finance has recognized TCS as one of the Big 4 Global IT Services Brands. (Tata Consultancy Services: About Us , 2015). Established in 1968, today TCS is the largest IT services firm in Asia. The company's mission is to help clients attain their business goals by

dint of IT services and solutions. TCS's values include leading change, respect for the individual, , learning and sharing, integrity and excellence. (TCS: Heritage and Values, 2015)

The firm's parent company, Tata Group, was founded by Jamsetji Tata in 1868. In 1968, Tata Group expanded in the new world of IT consultancy leading to the formation of Tata Consultancy Services. (About us - Our heritage, 2015) Today, TCS is one of the largest IT consultancy firms in Asia and among the top 10 global IT consultancy firms. TCS has 199 offices in 44 countries and employs more than 276,000 IT consultants representing 113 nationalities. (Tata Consultancy Services via @tatacompanies, 2015)

TCS is the first company in the world to receive enterprise-wide maturity level 5 on CMMI and P-CMM assessment for Services and Development, the highest appraisal for quality framework. Additionally TCS is the first IT firm to be assessed at this level and indeed a trailblazer in setting a new benchmark for quality framework. (TCS sets new benchmark in Quality, 2015). In June 2015, Forrester wave declared TCS to be a market leader in Asia Pacific due to the following reasons : rapid growth and investments in the region, expertise and experience in business transition services, involvement in innovative and complex technology and business projects and for achieving highest ranking in customer satisfaction among all IT companies in the report. (TCS News & Events: Press Release, 2015).

4.1.3.Cognizant

Cognizant Technology Solutions is an American multinational company headquartered in Teaneck, New Jersey, United States, North America. The company was originally founded in 1994 as an in-house technology unit of Dun & Bradstreet in Chennai ,India. In 1996, the company expanded its services to external clients. In 1997, the company moved its headquarters to Teaneck, New Jersey. During 2000, Cognizant witnessed a period of fast growth and eventually it became a fortune 500 company in 2011. In the same year Fortune magazine named Cognizant as the world's third most admired IT company. Fortune magazine has featured Cognizant in its global list of "100 Fastest-Growing Companies" for ten consecutive years from 2003 to 2012. (Encyclopedia, W. 2015).

Cognizant is a global leader in business and technology consultancy services. The company has been featured consistently and consecutively in many international and well renowned rankings like Fortune's most admired companies, Information Week's Elite 100 , Fortune 500 , Financial times 500 and Forbes Global 2000 list. (About Cognizant , 2015)

Cognizant is also a member of NASDAQ-100 and the S&P 500 and is consistently ranked among fastest growing and highest performing global companies. The driving force behind Cognizant's growth and high performance is their passion to help clients develop agile and innovative business. They help clients develop faster, cheaper and better business functions. (Company Overview, 2015)

Cognizant's approach is to engender new inspiration, ideas and passion to help clients succeed in an ever changing business environment. Cognizant is a born global company and has in-depth understanding of the new business landscape. Cognizant is mainly made up of millennial and so they comprehend the current generation of consumers and employees. They are experts in leveraging the power of technology to help their clients. (The Cognizant Difference, 2015)

Cognizant has developed unique value proposition for its clients that truly differentiates it from its competitors. As an illustration, Cognizant has developed unique concepts like Two-in-a-Box™ Relationship Model which has been featured in Harvard Business Review due to its innovativeness. Additionally, Cognizant has a global history and mind-set because it was "born global" and most of its employees are highly skilled millennial. Cognizant is a pioneer in developing Web 2.0-based platform that enables global collaboration and seamless sharing of knowledge and information across globe. Cognizant develops and offers unique solutions for the workplace of the future characterized by globalization, virtualization and evolving technologies that essentially revolves around big data analytics ,mobile communications, and cloud computing. (The Cognizant Difference, 2015)

Given the strategic significance of the abovementioned IT consulting firms, it was a rational decision on my part to choose these companies for the purpose of my case study. Additionally, these companies possess in-depth knowledge, experience and expertise in strategies related to business-IT alignment. Since my objective in this thesis will be to study the business-IT alignment process, naturally the chosen companies are perfect for the purpose of my analysis.

4.2 Case companies portrayal and description of IT strategy

This part of empirical research is mainly concerned with individual analysis of case companies as I endeavoured to seek answer to my first research questions regarding how case companies elucidate, portray and describe IT strategy to clients. At this point it is important to highlight the fact that when the case companies use the term "strategy" they actually mean

IT strategy. It is quite evident from case companies website that all services associated with the term “strategy” invariably involves IT strategy like digital technology, CRM software, marketing software, accounting and finance software, hardware solutions, predictive analytics, big data etc. In other words all services related to strategy actually leverage IT strategy to design, sustain and reinforce business strategy.

4.2.1 Accenture

The first thing one perceives when one visits Accenture’s strategy website is “The shape of you future begins here” in bold white extra-large fonts against black background. Accenture strategy involves shaping new business, operating model and eco-system. On the basis of the data currently available, it can be conferred that Accenture portrays strategy as a potent tool that can shape the future. The webpage states quite explicitly that Accenture strategy shapes future of clients by leveraging technology to influence industry and business model. In other words information technology strategy is aligned with business model of clients to alter and mould future business landscape. IT strategy is portrayed as a potent tool that can mould, alter and shape future business landscape because Accenture consultants possess profound business insight regarding how technology impacts business positively. (Accenture.com, 2015a)

Accenture’s website states that they are different from competitors because they are capable of shaping future by shaping value, business models and operating models. The website states that Accenture IT strategy is distinct and unique because their consultants possess competency in technology strategy, business strategy and operation strategy. (Accenture.com, 2015a)

Accenture strategy page divides strategy products and services under three main headings ; C-suite themes, business and technology and industry focus. The C-suite themes mainly focus on strategic risks and opportunities that business leaders face and is further sub-divided into competitiveness, digital disruption and workforce of the future. The strategy page devoted to business and technology states that the world is witnessing a collision of business and technology which engenders new opportunities and Accenture can aid clients in harnessing the growth and value from these new opportunities. Business and Technology strategy is further subdivided into various sub-segments ; CFO and Enterprise Value, Digital Strategy, Operation Strategy, Sales and Customer Service, Talent and organization and Technology

strategy. The strategy page concerning industry strategy is subdivided into various themes like Automotive, Banking, Capital Markets, Communications, Energy, Health and Insurance etc. (Accenture.com, 2015a). It is quite evident from their website that all services related to strategy, from C-suit themes to industry focus essentially leverage IT strategy to reinforce and sustain business strategy. Specifically speaking, IT strategy is portrayed as being inevitable for success of business strategy.

Strategy is also portrayed as a key component that increases and sustains competitive position in turbulent markets. Markets are described as being extremely volatile where success and failures are dramatic and violent and strategy is depicted as something that is inevitable for companies to retain competitive position. Digital technology is depicted as an inevitable component of competitive strategy that empowers companies to be agile, innovative, sustainable and profitable. (Accenture.com, 2015b)

Disruptive digital strategy is portrayed as a potent tool that can rewrite the rules of the game. Additionally, it is claimed that digital strategy can empower humans by making them more networked and democratic and truly futuristic. Furthermore digital technology necessitates the need for new HR strategy (Accenture.com, 2015c)

Business landscape is described as being complex, turbulent, volatile and constantly changing. With this in mind, Accenture portrays strategy as a potent tool that can aid companies operating in this turbulent landscape to be more agile, adaptive, innovative, flexible, anticipate change, enable radical transformation, lower cost, increase efficiency, shape future, redefine rules of game, develop network and connection and maintain organic an inorganic growth. (Accenture.com, 2015b)

Additionally, Accenture's Strategy web pages also presents pre- determined and specific goals for its clients and assumes that clients will readily pursue those goals. Some of the goals that clients are expected to pursue are to be "agile", "adaptive", "innovative", "flexible", "anticipate change", " undergo radical transformation", "lower cost", "increase efficiency", "shape future", and "redefine rules of game". Goal specification for clients is intricately linked with depiction and selling of strategy because motivation to pursue and attain these goals will ultimately influence clients to "buy" strategy from Accenture. In essence, Accenture portrays strategy as a formula that clarifies how a business should compete to attain pre-determined goals in a volatile and uncertain landscape.

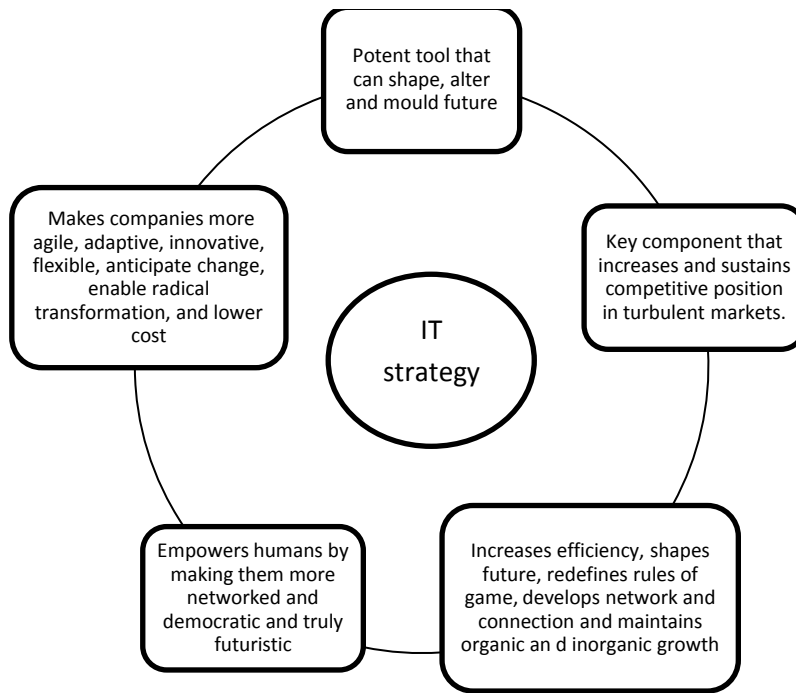


Figure 1: Accenture’s portrayal and description of IT strategy

4.2.2.TCS

TCS depicts IT strategy as a package of services that helps companies attain excellence in business. The webpage sends a strong message to readers that strategic partnership with TCS is inevitable for companies to acquire access to innovative IT strategy. Additionally, partnership and access to IT strategy consulting will transform companies to become more agile which in turn will facilitate business transition. IT strategy consulting will also help companies to manage their business more strategically and optimize their current investments. (Tcs.com, 2015)

Strategy is also depicted as a device that helps in planning forward. The strategy web page also cites numerous examples of IT strategy that has transformed business across globe. Additionally IT strategy is portrayed as culmination of best practises, methodologies and guidelines that facilitates project implementation process. An effective IT Strategy strengthens a company’s long term goals, short term goals, vision and mission. (Tcs.com, 2015)

TCS’ IT Strategy Consulting Services ensures alignment of business strategy, IT strategy and future direction. IT Strategy Consulting Services are further sub-divided into 10 distinct

services each portraying IT strategy in a unique way. As an illustration IT Strategy Assessment and Roadmap depicts strategy as business-focused service that helps companies create value in all business functions. (Tcs.com, 2015)

IT Shared Services Strategy depicts strategy as “shared services operating model” and this model encapsulates various services like development of business case, analysis of risk and IT process mapping etc. Cloud Strategy aids companies to adopt and assimilate into cloud process. IT Sourcing Strategy aids companies to optimize sourcing. In essence strategy is portrayed as package of various services that can help companies to transform their business, align various departments, processes and people with corporate goals, re-design organizational structure, manage demand and portfolio, optimize cost, derive scorecards, measure performance and set targets. (Tcs.com, 2015)

In essence, TCS depicts IT strategy as culmination of IT services and processes that aids companies in becoming market leader by attaining competitive advantage by dint of cost optimization, innovation and differentiation. This depiction of strategy is quite similar to Porter’s definition of strategy. Companies are recommended to adopt an “outside in” approach to strategy because TCS believes that such strategy negates the need to change the external landscape. In other words, instead of changing the external landscape, companies are advised to adapt to it . The assumption behind such proposition is that external world is beyond control while internal world is within company’s realm of influence. (TCS Perspectives, 2011)

Courtney (1997) has proposed that strategists can resort to three different “postures” to deal with uncertainty in accordance with level of uncertainty. They can shape the game, they can adapt to the game or they can just reserve their right to play the game in future. Along similar lines, TCS portrays strategy as a “posture” that companies can undertake in accordance with the level of uncertainty in external landscape. Additionally, since adaptive strategy is the most viable option at level 1 and level 3 of uncertainty, it is safe to conclude that TCS assumes that uncertainty in business landscape is at level 1 or level 3.



Figure 2 : TCS's portrayal and description of IT strategy

4.2.3.Cognizant

According to Cognizant, IT strategy aids companies in engendering new value and manage transition across all parts of their organizations. Workplaces are described as being virtual and global where strategy is inevitable for innovation, resource allocation and reinvention of processes that are aligned with latest trends. Cognizant consultants are adept at aligning IT strategy with business strategy and possess in-depth knowledge of business and IT. Strategy in essence creates competitive advantage via business and operating model transition. Cognizant offers various strategic IT services for business like business and target operating model, application portfolio rationalization, digital strategy and innovation, global sourcing transformation, business and IT strategy alignment etc.(Business & IT Strategy Consulting, 2015).

IT strategy ensures that operating model is aligned with business strategy, improves the operation of business processes, and creates coherent roadmaps from current state to desired state in future. Additionally IT strategy is portrayed as being potent enough to create sustainable competitive advantage by creating a digital strategy that is agile, adaptive and flexible to incorporate and adopt new business models. IT strategy can also help companies

to increase digital commerce and improve financial position. IT strategy also creates competitive advantage by transforming business. (Business & IT Strategy Consulting, 2015).

IT strategy is described as a potent technological tool that can bring about organizational alignment, enhance efficiency and performance, and provide strategic input to senior managers. IT strategy also aids companies in developing analytical models which in turn simplifies the process of outsourcing, staffing, transition and cost benefit analysis. IT strategy also helps companies to optimize cost, mitigate and manage risk and make informed decisions about future. (Business & IT Strategy Consulting, 2015).

Competitive advantage, agility, transition, transformation and roadmap to desired future are recurrent themes in Cognizant’s IT strategy web page. In essence, Cognizant portrays IT strategy as a package of “offerings” which aids companies to acquire complete advantage by becoming more agile, innovative, futuristic, cost efficient and adaptive to change. (Business & IT Strategy Consulting, 2015).

Depiction of strategy as a means to attain competitive advantage is quite similar to Porter’s (1996) depiction of strategy. Cognizant assures clients that IT strategy can lead to cost efficiency and cost optimization which resembles Porter’s(1996) cost leadership strategy. In addition, IT strategy is also depicted as a tool that can create a roadmap to desired future. (Business & IT Strategy Consulting, 2015).

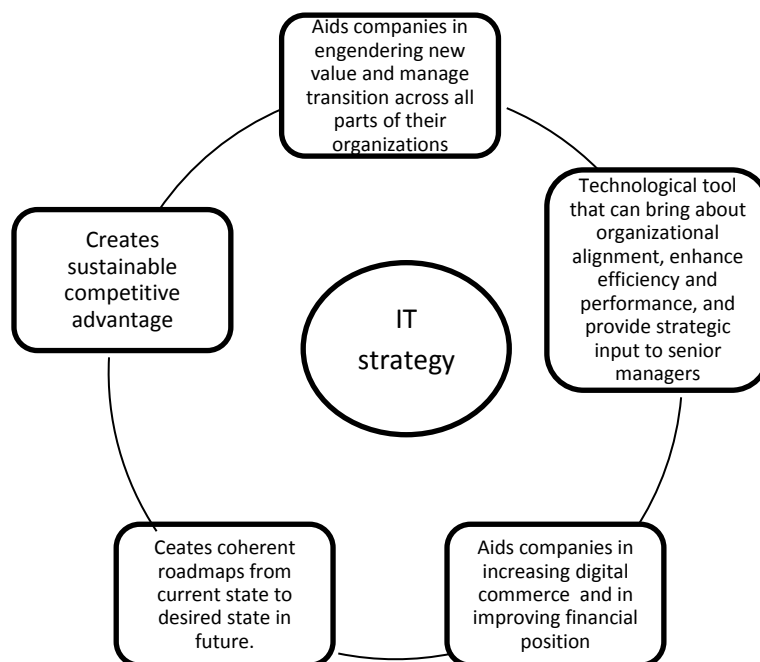


Figure 3 : Cognizant’s portrayal and description of IT strategy

4.3 Thematic analysis of strategic IT services offered by case companies to sustain and reinforce business strategies

This chapter will mainly focus on my second research question as I endeavour to synthesize key themes within strategic IT services offered by case companies to sustain and reinforce business strategies. On the basis of data collected from case companies website it is quite evident that certain themes are recurring, central and prominent when case companies discuss about alignment of IT strategy with business strategy. All other concepts and revolve around these strategic themes.

Specifically speaking, the case companies propose that IT strategy can be leveraged to engender value for business strategy in certain specific domains like strategic change, organizational structure re-design, strategic partnership, decision making under uncertainty and performance measurement. The subsequent chapters will provide in-depth analysis of key themes within strategic IT services provided by case companies. I begin the process by within-case analysis of Accenture followed by TCS and Cognizant. It is important to point out that in the subsequent pages I will treat each case company as a stand-alone entity and delve deep into individual cases to synthesize recurring and prominent themes.

4.3.1 Accenture

Strategic Change	<p>Accenture is a global leader in change management and change consulting services.</p> <p>Accenture offers “journey management” service for clients that typically consist of 5 phases</p> <p>Clients are offered concrete business solutions like faster adaption to change associated with merger and acquisition, cultural change, engaged workforce, increased employee productivity and retention.</p> <p>Accenture utilizes advanced IT processes and data analytics to manage and implement change programmes.</p>
Organizational structure Re-design	<p>Helps clients in re-designing organizational structure so that it is more aligned with business goals and corporate strategy.</p> <p>Accenture utilizes advanced IT tools like Integrated Business Services methodology,</p>

	Lean Sigma Techniques, site strategy tools and advanced data analytics tools to design organizational structure for its client.
Strategic Partnership Management	<p>Accenture helps clients in developing, implementing, monitoring and managing alliance and partnership strategy in a structured manner by leveraging the power of IT.</p> <p>Accenture also portrays itself as “partner” for clients.</p> <p>It has developed “alliance ecosystem” with 150 innovative global companies to combine knowledge, expertise and skills of global players and make it accessible to their clients.</p>
Decision making under uncertainty	<p>Accenture leverages the power of big data and predictive analytics to help companies make decisions under uncertain conditions.</p> <p>Accenture survey has revealed that majority (92%) of the companies/clients are satisfied with big data outcomes for business.</p>
Performance measurement and goal setting	<p>Accenture has developed several IT tools to measure performance and set goals.</p> <p>Accenture academy offers various courses related to performance measurement</p>

Table 2 : Thematic Analysis of Strategic IT services offered by Accenture

Strategic Change

There is overwhelming evidence corroborating to the fact that there exists an intricate connection between strategic change and alignment of IT strategy and business strategy. Accenture webpages states quite explicitly that such alignment eventually shapes the new landscape for business. Complicated change process requires innovative approach to change management that far surpasses the traditional approach to managing change. Statistics reveal that change management projects that rely on traditional approach mostly fail to deliver the desired value that is expected from such projects. . (Journey Management ,2015)

Additionally accelerating nature of change is making change management process a very complicated task. Due to enterprise wide transformation, companies have to manage not just

one change project but portfolio of transition projects. These transition projects give rise to a snowball effect, one change project creates the need for more change projects, ie one change project builds upon itself and becomes bigger and more complex by encapsulating other change projects. Accenture leverages IT strategy to help companies manage portfolio of change projects (Journey Management ,2015)

Accenture is a global leader in change management services. Accenture's change management services delivers concrete business solutions like faster adaption to change associated with merger and acquisition, cultural change, engaged workforce, increased employee productivity and retention. According to IDC MarketScape analysis Accenture is a worldwide leader in change consulting. Accenture utilizes advanced IT processes and data analytics to manage and implement change programmes. Accenture Change Tracking is an advanced analytics driven system that is capable of predicting, monitoring and managing complex change processes. Accenture's change management solutions offers three distinct services : change strategy, behaviour change and change enablement. (Change Management, 2015).

Change is a journey for managers and “journey management” is a crucial part of change management that helps managers to attain desired business goals with certainty. It also helps managers mitigate risks associated with change and makes organizations more agile and adaptive to change. Accenture has long term experience in managing journeys of change. (Journey Management ,2015)

As a matter of fact Accenture offers “journey management” service for clients that typically consist of 5 phases: Investigating the current business environment and identifying the need and drivers for initiating change project, envisioning and articulating the desired future for the organisation with concrete business goals, assessing and identifying the gap between current state and desired state that includes assessment of current strategies, leadership programmes and organizational culture, creating a road map representing this journey of change and prioritizing activities related to change in accordance with organization's capability to endure impacts of change and monitoring change from current state to desired state by monitoring multiple change projects(Journey Management ,2015)

Furthermore, Accenture offers change management services during various phases of strategic organizational transition. As an illustration such services are offered during transition to IT and business processes services. Due to rapid digitalization of workplaces,

companies have to create and nourish relationships with external IT service provider and this gives rise to complex transition projects that requires adept change managers. The initial phase of change when people have to change their way of working and get used to new IT processes and tools poses greatest risk. Such service externalization programmes and transition projects might have a negative impact on business if change managers are inefficient. Accenture's change management services reduces transition cost, facilitates speedy adoption of new operating model and reduces negative impact on business performance during such transition phase.(Accenture Outlook, 2015).

Change management service is also offered to shape future workforce who are adept in IT skills. Digitalization of workplace has made IT skill a necessity for employees. Therefore attracting and retaining right kind of people who are highly adept in IT skills is important for organization growth and productivity. Accenture helps clients in hiring and managing highly skilled IT workforce. Additionally, it also offers extensive training to employees so that they are more flexible, versatile and adaptable to workplace digitalization. Such workforce will be more aligned with digital demands of business and possess "IT mind-set". Accenture utilizes analytics, cloud, mobility and other emerging technologies to manage the transition process. (Shaping the IT Workforce of the Future, 2015)

Change management services is also offered during transition phase in mergers and acquisitions. Accenture offers expertise, knowledge and help to clients at each phase during the deal cycle . As a matter of fact, Accenture was involved in 6 of the 10 largest mergers in the last decade. During last 5 years, Accenture has aided clients in more than 850 M&A projects globally. Services offered includes developing IT and business synergies, support investment decisions by using advanced IT processes and analytics, and enhance IT spending. (Leveraging IT in Mergers, Acquisitions and Divestitures , 2015).

Change management service is also offered during organizational change. In essence Accenture leverages the power of IT to increase the pace and certainty of organizational transition. Special IT solutions like predictive analytics and change tracking programme mitigates uncertainty, increases precision of change management projects and enhances the pace of change. IT is also leveraged during decision making process and for identifying suitable paths during transition. As a matter of fact, Accenture has developed a highly advanced analytics called Accenture Change Tracking that helps managers predict and monitor all phases of organizational transition. (Organization Change Services, 2015).

Furthermore, due to rapid digitalization of workplaces, companies have to create and nourish relationships with external IT service provider and this gives rise to complex transition projects that requires adept change managers. The initial phase of change when people have to change their way of working and get used to new IT processes and tools poses greatest risk. Such service externalization programmes and transition projects might have a negative impact on business if change managers are inefficient. Accenture leverages the power of IT to offer change management services during such critical phase. (Accenture Outlook, 2015).

Organizational structure Re-design

Accenture also helps clients in re-designing organizational structure so that it is more aligned with business goals and corporate strategy. As a matter of fact, Accenture has partnered with WKKF in the past to re-design its organizational structure. WK Kellogg Foundation (WKKF) is the world's largest private, non-profit organization (WK Kellogg Foundation, 2015)

According to IDC MarketScape analysis, Accenture is a global leader in organizational consulting. Accenture leverages the power of IT and utilizes advanced data analytics to re-design and manage complex corporate structure and culture.(IDC Positions Accenture as an Organizational and Change Consulting Leader, 2015).

Besides, Accenture proposes that right organizational model makes an organization more flexible, agile and adaptive to change. The business landscape is dynamic and evolving so it is very important for organizations to maintain a flexible and agile organizational structure. Accenture has analysed multiple internal change group worldwide. On the basis of this analysis Accenture has identified specific key drivers and questions that helps an organization identify the organizational structure that is aligned with their goals. (Creating an internal change capability, 2015)

Accenture has also helped a leading global delivery company re-design its organizational structure . The new organizational structure enhanced customer experience, optimized costs, streamlined processes and unified corporate governance framework. Accenture utilized Integrated Business Services methodology, Lean Sigma Techniques, site strategy tools and advanced data analytics tools to design organizational structure for its client. (Global Delivery Company Improves Customer Experience, 2015)

Strategic Partnership Management

Accenture helps clients in developing, implementing, monitoring and managing alliance and partnership strategy in a structured manner by leveraging the power of IT. In addition Accenture also portrays itself as “partner” for clients. Accenture has developed strategic partnership with over 150 innovative global companies who are market leaders and trailblazers in their field of operation. Accenture terms this strategic partner pool as “alliance ecosystem” Accenture website states quite explicitly that they have developed this alliance ecosystem to combine knowledge, expertise and skills of global players and make it accessible to their clients. In other words, when clients seek IT consultancy services from Accenture, they automatically acquire access to Accenture’s alliance ecosystem. It is quite evident from Accenture’s alliance partners list that most partners are global technology firms who also possess expertise in business strategy. Some of Accenture’s partners are Microsoft, Dell, Oracle, IBM, HP and Cisco. (Accenture Alliances List, 2015)

Accenture helps clients from both public and private sector to build, foster and manage strategic partnership . Leading business organizations, NGO’S and public sector companies has consulted Accenture regarding partnership management strategy. As an illustration, Accenture has developed and implemented strategies to make the Washington Aerospace partnership more competitive. Washington Aerospace Partnership , a public-private partnership, brings together leaders from all sectors to develop aerospace cluster in the State of Washington in the United States. The main aim of this partnership is organic growth and rapid development of aerospace sector. (Washington Aerospace Partnership, 2015)

Accenture Development Partnerships team has partnered with SUSTAIN Global Partnership to develop a network of strategic partners all over globe. Accenture has also developed technology strategy, value proposition, business plan and roadmap to improve Global Partnership programme. This global partnership programmes aids humanitarian agencies to respond quickly to crisis situation by providing them access to a network of influential global partners. Global partners includes leading NGO’s and business leaders. Global partnership programme leverages advanced data analytics, systems and technologies to optimize cost, improve efficiency and maximize positive impact. Clients are provided access to knowledge, expertise and network of global partners.(SUSTAIN Global Partnership, 2015)

Accenture has also developed innovative strategies to sustain strategic partnership within financial institutions. The volatile nature of finance industry along with accelerating change

in technology has rendered strategic partnerships between Chief Financial Officer (CFO) and Chief Risk Officer(CRO) a necessity. Close collaboration and partnership between CFO and CRO makes the company more agile and competent to mitigate risk .Accenture has come up with innovative strategies to strengthen the CFO-CRO partnership (Rethinking Risk and Finance, 2015)

The Accenture Development Partnerships team has partnered with strategic global partners to launch Project Laser Beam, a multi-sector, multi-stakeholder project. The main aim of this project is to overcome the challenge of child under-nutrition, hygiene and livelihood. This unique partnership programmes has enabled diverse group of organizations from varies countries and culture to come together and work towards common goal. Accenture has leveraged advanced technology and virtual working environment to manage this diverse multi-stakeholder partnership. In essence, Accenture has offered support to engage and network partners globally and locally by co-ordinating management programmes and government structure. (Project Laser Beam ,2015).

Decision making under uncertainty

Decision making under certainty is a very complex and challenging process for managers because one has to consider multiple futuristic scenario, multiple models and multiple trends. Accenture proposes that leveraging the power of IT and harnessing the potential of big data can help strategist in decision making process under uncertainty. Big data aids in identifying and highlighting emerging trends and it has the potential to predict patterns that might emerge in future. As a matter of fact, the power of Big Data is already being leveraged by government, Ngo's and business leaders around the world. Accenture helps clients to harness and leverage the power of big data for making complex decisions under uncertain and volatile conditions. (Big Data and Analytics in the Developing World, 2015).

Accenture research has revealed that decision making under uncertainty is the number one challenge faced by investment banks. While the significance of holistic thinking and flawless execution cannot be denied what is equally important is that insights are validated by data. In other words, under uncertain conditions, decision making should be data driven. Additionally analytical processes (eg big data and predictive analytics) should be well embedded within

the organization. Accenture calls this process as “analytics enabled decision making”. (Top 10 challenges for investment banks,2012).

Accenture survey has revealed that majority (92%) of the companies/clients are satisfied with big data outcomes for business. Companies are leveraging the power of big data for a wide array of business decisions under uncertain conditions like decisions regarding new revenue sources, new product and service development, business transition etc. However it is important for companies to develop data mining and data analytics skills by hiring external help for training and developing employees with right skill-set. (Big Success from Big Data, 2015).

Accenture also provides special service to mobile operators by helping them monetize big data. Mobile phones have become data hub of precise and real time information as most people use it as their primary device to connect with the world and acquire information. Consequently mobile operators have access to huge volume of data. They can monetize big data and leverage such data to make crucial decisions regarding cross-selling, upselling, improving network management and enhancing customer service. Accenture helps mobile operators to monetize big data by helping them to convert such data into meaningful information that is relevant for decision making in other industries like marketing, finance retain, manufacturing etc. Strategic information from big data facilitates decision making process for mobile operators as well as other industries. (Data Monetization in the Age of Big Data, 2015)

Accenture has helped a large gaming and entertainment company in decision making process by dint of big data. Accenture offered data mining services to this company to improve decision making process with regards to marketing strategy, product and service development. With help of Accenture this company acquired strategic insight into customer behaviour, preferences and patterns in buying. (Big Data Analytics, 2015)

Accenture also helps health care industries to make crucial decision under uncertain conditions.. In essence the “predictive intelligence” potential of Big Data is used to make crucial decisions regarding therapy most suitable for patients, clinical research investments, and how different approaches and therapies can be combined to offer individualized health care service to patients. In future big data, analytics and technology will empower consumers to become more intelligent purchasers of health care services.(Interview with Jeff Elton on Big Data and Predictive Intelligence, 2015).

Performance measurement and goal setting

Accenture places much importance on performance measurement and proposes that measuring performance can aid companies in acquiring control over strategy. Additionally, according to Accenture , goal setting is also very significant and intricately tied with the success of strategy. As a matter of fact, Accenture Academy offers a special course called “Improving Success Using Key Performance Indicators”. This course offers valuable insight, knowledge and expertise to clients regarding development and implementation of KPI to facilitate decision making process. Additionally clients also learn how to leverage KPI’s in reviewing strategy. (Accentureacademy.com, 2015)

Accenture Academy also offers course on performance measurement. Accenture proposes that measuring performance helps organizations identify its effectiveness in reaching its pre-determined goals. Metrics by measuring performance drives organizational behaviour. However it is very important for organizations to identify and utilize correct metrics. The performance measurement course offered by Accenture Academy helps clients to comprehend measurement concepts, identify KPI’s and overcome various measurement challenges. (Using Metrics to Drive Performance, 2015)

Accenture has leveraged the power of IT to develop “MOST”, a work measurement system designed to measure and track productivity across all business domains. Accenture has wide base of clients who are employing MOST to measure productivity and performance. Accenture proposes that MOST aids clients in achieving high performance by helping them to measure work and performance accurately.(MOST Work Measurement Systems, 2015)

4.3.2.TCS

Strategic Change	<p>TCS offers Business Process and Change Management Consulting Services for its clients and it is a unique and holistic approach to “make change happen in a successful way”</p> <p>The solutions and offerings under change management services are : Customer Driven Business Transformation, Shared Services Business Transformation, Industry-specific Business Transformation, Strategy Alignment, Organizational Change Management, Business Analytics and Enterprise solutions.</p>
Organizational structure Re-design	<p>TCS helps clients in designing a well-defined organizational structure with coherent competency, skill, accountability and corporate governance.</p> <p>Advanced techniques like Lean, Kanban and Six Sigma are also leveraged to bring about transformation in organizational design.</p>
Strategic Partnership	<p>Global alliance with major technology partners has helped TCS create a strong network of partners. When clients purchase “IT strategy” from TCS, they automatically acquire access to this network of global partners.</p> <p>Clients can harness the power of latest technology, software and training directly from partners to strengthen their business strategy</p> <p>TCS also portrays itself as “partner” for clients</p>

Table 3 : Thematic Analysis of Strategic IT services offered by TCS

Decision making under uncertainty	<p>TCS has developed several IT tools and processes to help clients make complex decisions under uncertain conditions.</p> <p>Examples include machine learning algorithm, Big Data and predictive analytics.</p> <p>Decisions related to risk management, cost optimization and identification of new business opportunities can be simplified with predictive analytics. Predictive analytics model includes Customer lifetime value analytics, Campaign analytics, Fraud analytics, Web analytics, Social network analytics, Social media analytics etc</p>
Performance measurement and goal setting	<p>By leveraging the power of IT, TCS has designed various software, tools and platforms to measure performance in accordance with pre-determined goals.</p> <p>Examples include TCS Digital Integrated Marketing Enabler (DIME) and TCS Customer Engagement Solution</p> <p>The KPI's designed by TCS can be utilized across all business domains like marketing, human resource, IT, finance and sustainability.</p>

Table 3 : Thematic Analysis of Strategic IT services offered by TCS (continued)

Strategic change

TCS offers change management services to its clients. TCS proposes that transition process fails because strategic objectives are incoherent and often misunderstood and there is lack of alignment between system, processes and business strategy. TCS helps clients by clarifying their objectives related to business strategy. Additionally it also develops operating models for clients that aligns various processes and system with corporate strategy. TCS' Business Process and Change Management Consulting Services is a unique and holistic approach to "make change happen in a successful way". This service is unique because TCS consultants possess knowledge and expertise in IT strategy as well as business strategy and they leverage

this holistic knowledge to create competitive advantage for clients. .(Business Process & Change Management: Consulting: Offerings, 2015).

The solutions and offerings under change management services are : Customer Driven Business Transformation, Shared Services Business Transformation, Industry-specific Business Transformation, Strategy Alignment, Organizational Change Management, Business Analytics and Enterprise solutions. In essence the power of IT is leveraged to help clients design, implement and manage the change process. TCS states quite explicitly that their service related to change management is unparalleled because they utilize their expertise in technological innovation to bring about business transition. Their consultants possess knowledge and experience in IT strategy, change management and business process re-engineering and they combine this knowledge to manage transition.(Business Process & Change Management: Consulting: Offerings, 2015).

TCS's clients who have sought Business Process and Change Management Consulting Services include a leading power and utility company in Saudi Arabia, (TCS helps a leading power and utility company in Saudi Arabia transform its business processes,2015), an Australian provider of subscription television services, (TCS helps a leading Australian subscription television provider transform its core broadcasting operations, 2015) TELENOR ASA and Starbucks.(Consulting, 2015), Norway Post.(TCS News & Events, 2015)

Besides business transition services TCS also offers special services related to IT transformation. The main objectives of such transformation is to optimize cost and bring about alignment between people, processes and technology. TCS proposes that business landscape is becoming more and more complex and they can help clients in “organising this complexity”, make a strategic hypothesis for positive outcome and success, and clarify actions that needs to be undertaken to implement the strategy. As a matter of fact TCS has helped clients in IT transformation for several decades. The specific services offered under IT transformation includes optimizing and reducing IT costs, diverting strategic IT spending, managing transition in the domain of people and processes so that they embrace strategic IT transition, making IT self-supporting by aligning it with business strategy. (Building Competence in IT Transformation, 2015)

TCS proposes that IT costs when optimized releases resources that can be utilized for bringing about business transition. Currently IT is mainly used for running business, however IT has the potential to bring about business transition. TCS helps clients in bringing about

strategic change in IT cost model by optimizing IT infrastructure, re-architecting application and strategic global sourcing.(Rebalancing IT Cost to Fund Business Change, 2015)

Organizational structure Re-design

TCS offers organizational structure re-design services to its clients by leveraging IT expertise and knowledge. TCS helps clients in designing a well-defined organizational structure with coherent competency, skill, accountability and corporate governance. IT operating model design and alignment between people, process, and technology are given special consideration during the re-design process. (IT Strategy Consulting, 2015)

Organizational structure re-design service is also offered within core service of business design and improvement. Generally speaking, business architecture, business process management and operating models are assessed and utilized to re-design organizational structure. Additionally, advanced techniques like Lean, Kanban and Six Sigma are also leveraged to bring about transformation in organizational design. Organizational re-design helps clients in optimizing their business processes. (Business and IT Architecture, 2015)

Siemens, a market leader in electronics and electrical engineering has sought consultation from TCS regarding organization structure re-design. Siemens wanted to re-align its organizational structure to strengthen and simplify various processes related to HR. It has over 300,000 employees around 200 countries and re-alignment of organizational structure to simplify HR tasks was a complex process. TCS carried out this complex process in three phases. Firstly, it carried out an impact analysis of on-going programmes. This was done to ensure that the change process did not disrupt significant HR process like payroll. Secondly a set-up driven sector was established. Thirdly a new record system was established to code and store all strategic information. Finally, the code design was simplified to enhance user experience. This organizational structure re-alignment has helped Siemens to mitigate negative impact of bureaucracy, accelerate decision making process, optimize cost, and streamline various HR functions. Siemens has stated that TCS has helped them in a critical milestone achievement with their valuable contribution towards organizational structure re-design. (Siemens Successfully Realigns Its Organizational Structure to Strengthen and Simplify HR Processes, 2015).

TCS has also published several white papers and reports on organizational structure. As an illustration it has published a report regarding organizational structure most suitable for omni-

channel banks. Banks are adopting omni-channel strategy, i.e. customers can access their services from multiple channels like i-pad, mobile, laptop etc. anytime and anywhere. However materializing such omni channel strategy is a complicated process. TCS states that IT technology can be leveraged to help clients in developing and implementing omni-channel strategy. However, the main hurdle behind materializing omni-channel strategy is not technological but organizational. In other words it is very important for companies to have centralized organization structure because such structure is aligned with omni-channel strategy. Currently most banks have rigid hierarchical and fragmented organizational structure and it has a negative impact on omni-channel strategy.(Organizing the Retail Bank for Omni-Channel, 2015)

Strategic Partnership

TCS believes that strategic partnerships engenders sustainable positive outcome for all partners and stakeholders. Strategic partnership is a potent tool for managing volatile business environment, people and processes. As a matter of fact, strategic partnership is an important source of competitive advantage. TCS divides its partners into two different groups :strategic partners and solution partners. The former includes leading technology companies and latter includes niche players. TCS's strategic partners are global leaders in technology like Cisco, Google, HP, IBM, Microsoft etc. Strategic partnership helps TCS leverage the power of collective knowledge of its partners. (TCS Alliances, 2015)

Global alliance with major technology partners has helped TCS create a strong network of partners. When clients purchase "IT strategy" from TCS, they automatically acquire access to this network of global partners. Clients can harness the power of latest technology, software and training directly from partners to strengthen their business strategy. In other words, TCS has formed strategic partnerships with global technology players with the aim of helping clients to maximize their business performance. Clients, when they seek consultancy services from TCS automatically enter into partnership relations with major global players. TCS has also designed special "partner programmes" that facilitates joint learning, training and knowledge transfer between partners. (TCS: Global Alliances, (2015)

The TCS alliance partners have several advantages. As an illustration, partner companies and TCS combine their knowledge, experience and expertise to create new services and solutions

to enhance business performance. Additionally, clients get access to development software, advanced IT architecture and configuration related assistance. Partners also get access to resources for developing and selling unique solutions. TCS: Global Alliances, (2015)

TCS also portrays itself as “partner” for clients. In other words, businesses when they seek consultancy and IT services from TCS, automatically enter into a partnership relation with TCS. TCS- client relationship is essentially strategic partnership agreement. (TCS Corporate Brochure, 2015).

TCS puts in lot of effort in developing and nourishing partnership relations with its clients. As an illustration, TCS was an IT vendor for Siemens but gradually evolved to become a strategic partner. Partnership between TCS and Siemens is based on trust, understanding and an appreciation for partner’s culture. (TCS Media, 2015).

TCS has been honoured with Pegasystems’ Partner Excellence Award. The awards is offered to Pegasystems’ partners who engender customer success by creating unique solutions that enhances agility and innovation. (TCS News & Events, 2015).

Decision making under uncertainty

TCS proposes that under uncertain and volatile conditions, decision makers should not rely on gut feeling and intuition. Telecom companies should embed predictive analytics in their business processes and decision making should be based on predictive analytics. Predictive analytics is the process of distilling and deducing relevant information from structured and unstructured data and utilizing such information for determining patterns and predicting future trends. Predictive analytics utilizes a number of techniques to predict future like data mining, machine learning and statistical modelling. (Predictive Analytics, 2015)

As a matter of fact decision making based on predictive analytics offers highest return across all business domain like customer relationship management, marketing and sales. For instance, a telecom customer lifecycle has four phases like acquisition, relationship, retention and win back and it is possible to embed analytics model at every phase. Businesses can gain strategic advantage by embedding predictive analytics model. Predictive analytics can add value to business by solving complex business problems using statistical models. Decisions related to risk management, cost optimization and identification of new business opportunities can be simplified with predictive analytics. Predictive analytics model includes

Customer lifetime value analytics, Campaign analytics, Fraud analytics, Web analytics, Social network analytics, Social media analytics etc. (Predictive Analytics, 2015)

Research has revealed that most manufacturing companies still rely on human experience and intuition for decision making under uncertain conditions. However with the development of IT and the advent of machine learning algorithm and Big Data, companies are moving beyond decision making based on experience. More and more companies are leveraging the power of predictive analytics to make accurate decisions under volatile and uncertain conditions. Big Data technology can leverage Machine learning techniques and help companies make accurate decisions and achieve superior performance. However the process requires co-operation from top managers, availability of relevant data, and support from academia and technology partners. (Using Big Data for Machine Learning Analytics in Manufacturing,2015).

Predictive analytics is also being utilized in the domain of human resource. Various HR processes like talent acquisition, retention, attrition risk management and capacity planning can be simplified and made more accurate with predictive analytics.(PredictiveAnalytics White Paper, 2015)

Big data and predictive analytics can also be utilized for decision makers in the domain of Finance. Data captured by ERP, CRM and point of sales tools can be converted to meaningful information that can be utilized for forecasting, planning, budgeting and consolidating financial information. As a matter of fact, predictive analytics will ultimately lead to evolution of Finance functions. (The new 'A and B' of the Finance Function, 2015)

Performance measurement and Goal setting

TCS proposes that measuring performance, setting goals and setting up appropriate metrics is very significant for business. By leveraging the power of IT, TCS has designed various software, tools and platforms to measure performance in accordance with pre-determined goals. The KPI's designed by TCS can be utilized across all business domains like marketing, human resource, IT, finance and sustainability.

TCS Digital Integrated Marketing Enabler (DIME) is a platform that empowers marketers to manage marketing campaigns by leveraging digital channels. One significant advantage of this platform is that it utilizes Contextual Cross Channel Analytics and statistics to present channel specific data as KPI's. This helps marketing managers measure performance of their

marketing campaigns precisely and accurately.(TCS Digital Integrated Marketing Enabler, 2015)

TCS Customer Engagement Solution – Wheel of Engagement leverages KPI's specially designed for social media and utilizes such information at every stage of consumer lifecycle. KPI's help in measuring the impact of marketing campaigns accurately and precisely and consequently resource allocation process is optimized. Additionally the solution also helps in improving customer-centric communication and in measuring the ROI on customer engagement. Analytics and KPI's aids CRM managers in comprehending customer behaviour accurately and it increases retention rate. (Customer Engagement Solution,2015)

A TCS white paper proposes how KPI's can be designed to measure human resource performance. Such performance measure leverages the balanced score card approach and measures ROI of human capital. The process essentially involves identifying various financial and non-financial measures, attaching tangible targets to them and then reviewing these targets to ascertain whether performance matches pre-determined goals. TCS has forwarded ten KPI's for measuring human resource performance: Paying for Performance, Resource Competency Index / Gap, Employee Engagement Score, Absenteeism Rate, Employee Capability Score, Human Capital ROI, Employee Satisfaction Index, Compliance Score ,Span of Control and Attrition Rate. Designing and Measuring Human Capital Key Performance Indicators, (2015) .

TCS proposes that KPI's can also be utilized in sustainability performance reporting. As a matter of fact, measures will enable stakeholders in measuring the effectiveness of sustainability projects. Specially designed software can facilitate the process of sustainability performance measurement. Data checks should be embedded within the software to update and trend KPI. The power of technology can be leveraged to track, monitor, measure and analyze KPI's related to sustainability on a regular basis. Such measurement will help companies in meeting its goals and targets more effectively. (Sustainability in Manufacturing, 2015)

4.3.3.Cognizant

Strategic Change	<p>Cognizant helps clients in managing change by helping them with various transition challenges like organization operating models, technological transformation and regulatory reforms, transitions related to outsourcing, post-merger integration challenges, and restructuring.</p> <p>Specific services offered by Cognizant include organization readiness assessment, change impact assessment and analysis, stakeholder analysis and engagement, organization design, communication strategy, skill gap assessment and training.</p>
Organizational structure Re-design	<p>The core services included within this service include governance model creation, assessing the influence of transition on organizational structure, developing an efficient organizational structure that operates effectively after transition, determine various roles that needs to be eliminated or altered after transition</p>
Strategic Partnership	<p>Cognizant has developed strategic partnership with global technology companies thereby giving rise to global network of partners.</p> <p>When clients purchase IT consultancy services from Cognizant, they automatically acquire access to its network of partners. It runs various projects in collaboration with its partners to solve complex business challenges.</p>

Table 4 :Thematic analysis of strategic IT services offered by Cognizant

Decision making under uncertainty	<p>Cognizant leverages the power of IT to help business organizations anticipate change and undertake complex decisions. Specifically speaking the power of predictive analytics and big data are utilized to predict future.</p> <p>Cognizant has developed several IT tools and processes to help clients in decision making. Such tools can be utilized across all business domains like marketing, finance, HR, CRM etc.</p> <p>IT tools developed by Cognizant helps clients to mine structured and unstructured data to decipher strategic information about customer preference, competitor intelligence, effectiveness of marketing campaigns etc</p>
Performance Measurement and Goal setting	<p>Cognizant has leveraged the power of IT to develop various performance measurement tools.</p> <p>Such tools aid business in defining, measuring and managing performance against strategic goals.</p> <p>Cognizant's performance measurement tools can be utilized to measure performance across all business domains like IT, finance, accounting, logistics asset and wealth management etc.</p>

Table 4 : Thematic Analysis of strategic IT services offered by Cognizant(continued)

Strategic Change

Cognizant provides organizational change management services for its clients by leveraging the power of IT. Cognizant proposes that business transformation strategy might fail without adequate change management. Change management encapsulates embracing new mind-sets, technologies and processes. Cognizant helps clients in managing change by helping them with various transition challenges like organization operating models, technological

transformation and regulatory reforms, transitions related to outsourcing, post-merger integration challenges, and restructuring. Specific services offered by Cognizant include organization readiness assessment, change impact assessment and analysis, stakeholder analysis and engagement, organization design, communication strategy, skill gap assessment and training. (Organizational Change Management, 2015)

The power of technology can be leveraged to drive organizational change. Research conducted by Cognizant in this area reveals that by adopting new technology 74% of respondents changed their business processes, 61% changed employee relationship, strategic partners and customers and 50% re-designed their organizational structure. Therefore technology plays a crucial part in bringing about business transition. As a matter of fact, leading technology users made maximum significant changes in their operating model by leveraging IT.

Major changes by technology user Figure 7

QUESTION: To what degree has the use of new technologies caused you to make changes in the following areas?
% rating 8-10

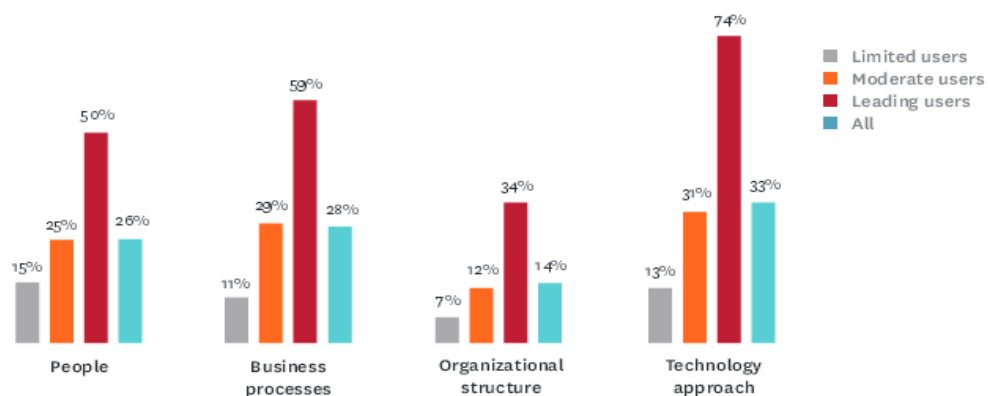


Figure 4: Major changes by technology user (from The Re-invention of Business 2015, 9.)

It is quite evident that leading users of technology made maximum changes in organizational model related to people, business processes, organizational structure and technology. Additionally, employees of leading technology using company embraced change more readily.(The Re-invention of Business, 2015)

However, in order to bring about total business transformation and business reinvention new technology should be deeply embedded across all business processes. Research has revealed that leading users of technology reap greater benefit from technology compared to users who

use technology moderately. Leading technology users undertake a strategic approach and utilize new technology to gain competitive advantage. Strategic changes include developing strong technology infrastructure and enhanced and seamless connection with employees, suppliers and customers.(Reinventing Business with New Operating Models, 2015)

Organizational structure Re-design

Cognizant offers organizational structure re-designs services for its clients. The core services included within this service are governance model creation, assessing the influence of transition on organizational structure, developing an efficient organizational structure that operates effectively after transition, determine various roles that needs to be eliminated or altered after transition.(Organizational Change Management, 2015)

The power of IT can be leveraged to re-design organizational structure. A research conducted by Cognizant revealed that leading users of IT made maximum changes to organizational structure while limited users of IT made least amount of changes. .(The Re-invention of Business, 2015)

Cognizant also offers specially designed services for gaming industries. According to Cognizant, gaming industries are unique and complex because customers in such industries expect high level of engagement, customization and interaction. Brand image and hype also plays a strategic role in success of gaming industries. Therefore gaming industries need special organizational structure that is tightly aligned with its strategic goals. Cognizant can help gaming industries determine an organizational structure that is most suitable for their strategic goal attainment.(Cognizant Solutions Overview, 2015)

Strategic Partnership

Cognizant has developed strategic partnership and alliance with leading global companies. These partnerships helps them to pool their partners knowledge and expertise thereby enabling them to offer world class service and solutions to their clients. When clients purchase IT consultancy services from Cognizant, they automatically acquire access to its network of partners. It is quite evident from their list of partners that most of their alliance partners are leading IT, software or digital service providing companies offering unique solutions to address business challenges related to marketing, finance, HR, CRM and

accounting. . In other words these strategic partnerships have been developed to further leverage their expertise in IT in solving complex business problems. Some of their strategic partners include Cisco, IBM, Microsoft, and HP.(Business Partners, 2015)

Cognizant has developed premium partnership with Microsoft and has been awarded “gold status” by Microsoft. This alliance has enabled Cognizant to leverage the expertise of more than 10,000 Microsoft technologists. Microsoft and Cognizant are pooling their knowledge, resource and expertise in technology to help their customers reinvent their business and organization. (Business Partners Cognizant Technology Solutions, 2015)

Furthermore, Cognizant has also developed premium partnership with IBM. This partnership enables Cognizant to collaborate with IBM’s highly specialized Software Group and the Systems & Technology Group. This alliance has enabled Cognizant to acquire access to IBM’s support centre, labs, software, and IBM’s Competency Centers for benchmarking and porting. Cognizant’s customers are able to get various solutions related to business faster as a result of this alliance with IBM. Cognizant and IBM are running various joint technology projects like business analytics, commerce and application, information management, services management (Tivoli) projects etc.. The main aim of these projects is to address complex business challenges.(IBM, 2015)

Decision making under uncertainty

Cognizant proposes that world is becoming virtual, global and complex undergoing continuous transition. Therefore businesses need to be proactive and “anticipate change” before it materializes. The power of IT can be leveraged to help business organizations anticipate change. Specifically speaking the power of predictive analytics and big data can be utilized to predict future. Besides, predictive analytics will also make organizations more agile and adaptive to change. Furthermore, predictive analytics can help organizations predict consumer behaviour, market direction and provide strategic direction to business. However, organizational structures, tools and processes should be well aligned to generate tangible business results. (Big Data Analytics, 2015)

As a matter of fact predictive analytics enables business to enhance relationship with customers by providing them in-depth customer insight. Cognizant has developed a special predictive analytics tools called Code Halos to improve market awareness, product

development, brand preference and brand influence and identify new consumer group.(Cognizant Whitepapers Insight, 2015)

Cognizant has also developed special predictive analytics for social media. Such analytics will help organizations mine structured and unstructured data to decipher strategic information about customer preference, competitor intelligence, effectiveness of marketing campaigns etc. Such strategic information can be leveraged to create value across all business domains like marketing, sales, finance, accounting etc. (Social Media Analytics, 2015)

Performance Measurement and Goal setting

Cognizant proposes that managing performance is inevitable for executing business strategy. The entire business strategy might fail in the absence of appropriate performance management. Additionally one will fail to manage something that one can't measure, so measuring performance with right metrics is very important. Cognizant has leveraged the power of IT to develop various performance management tools. Such tools aid business in defining, measuring and managing its performance against strategic goals. Therefore setting appropriate goals is also very important. Performance management essentially encapsulates various closed loop analytics process that leverages the power of technology. (Performance-Management, 2015)

Cognizant's performance measurement tools can be utilized to measure performance across all business domains like IT, finance, accounting, logistics asset and wealth management etc. It is very important for distributors, manufacturers and third party players to measure performance in logistics sector. However currently most distributors and managers use outdated technology and metrics to measure logistics performance. Cognizant has developed a potent tool called Logistics Performance Management (LPM) which measures logistics performance accurately. This tool encapsulates three vital components: real time snapshots of KPI on web, business intelligence and enterprise software to manage and measure information and a systematic top down methodology. (Performance-Management, 2015).

A large US based insurance company sought consultancy services from Cognizant regarding challenges related to IT governance model. Cognizant leveraged the power of IT to measure and manage performance and resource that resulted in 10 to 15% reduction in ownership cost.(Maximizing Business Value Through Effective IT Governance, 2015).

Cognizant has also developed a decision support framework called IAVM that helps business decision maker achieve their strategic goals. Cognizant claims that IAVM can help decision maker in achieving their goals “under any economic climate”. Defining metrics and updating KPI’s are important significant steps in IAVP framework. IAVM framework improves and enhances the company’s metrics utilizing complex mathematical procedures that involves measuring employee performance and project staffing. Additionally KPI’s are also improved by weighted outlier methodology. (Embracing Real time Analytics for Proactive Business Management, 2015)

4.4. Cross case analysis

This chapter mainly focuses on comparing and contrasting the data gathered from all three case companies. In other words, in the subsequent pages I will discuss how the case company’s comprehension and approach to strategic themes related to IT strategy diverge and converge from each other.

4.4.1. Portrayal of IT Strategy

Accenture portrays IT strategy as a potent tool that can mould, alter and shape future business landscape to engender greater business value. Cognizant portrays IT strategy as a package of “offerings” which aids companies to acquire competitive advantage by becoming more agile, innovative, futuristic, cost efficient and adaptive to change. Additionally, IT strategy is also depicted as a tool that can create a roadmap to desired future. TCS depicts IT strategy as a package of services that helps companies in attaining excellence in business by planning, monitoring, controlling and measuring performance across all business units.

It is quite evident that the case companies market IT strategy as tool, formula or package of services that helps companies in pursuing and attaining superior competitiveness. All three case companies adopt a forward looking and futuristic approach and discuss about future business landscape and forward planning. However the case companies differ in their view regarding whether IT strategy should be used for adapting to future or shaping future.

While Accenture portrays IT strategy as a tool that can help companies in shaping future, TCS and Cognizant portray IT strategy as package of services that helps companies in planning and adapting to changing business landscape. Cognizant recommends companies to adapt to change, however unlike TCS, they do not specifically advice clients to formulate strategy in such a way that negates the need to shape external landscape.

On the other hand TCS recommends companies to adopt an “outside in” approach to strategy because TCS believes that such strategy negates the need to change the external landscape. In other words, TCS strongly recommends companies to adapt to external landscape and to avoid endeavours related to shaping it. The assumption behind such proposition is that external world is beyond control while internal world is within company’s realm of influence.

This approach is strikingly different from Accenture’s approach to IT strategy because Accenture lays strong emphasis on “shaping future”. Accenture strategy involves shaping new business, operating model and eco-system. On the basis of data currently available it is safe to assume that unlike TCS Accenture believes that external business landscape is within one’s realm of influence and can be altered by dint of IT strategy.

Accenture websites, blogs and PR materials sends a strong message that they shape client’s future by leveraging technology to influence industry and business model. In other words information technology strategy is aligned with business model of clients to alter and mould future business landscape. IT strategy is portrayed as a potent tool that can mould, alter and shape future business landscape because Accenture consultants possess profound business insight regarding how technology impacts business positively. As a matter of fact, Accenture proclaims that they are different from competitors because they are capable of shaping future by shaping value, business models and operating models.

The case companies are quite similar in their perception and description of business landscape and they utilize these specific characteristics of external landscape to justify why IT strategy is inevitable for business .To elaborate further, they describe business landscape as complex, turbulent, uncertain, volatile and under constant transition ; therefore IT strategy is inevitable for companies to sustain and maintain competitive advantage in a landscape with volatile and complex characteristics. Additionally, IT strategy is portrayed as a potent tool that can aid companies operating in this turbulent landscape to be more agile, adaptive, innovative, and flexible, anticipate change, enable radical transformation, lower cost, and increase efficiency. The case companies assume that companies will gain competitive advantage by being agile, adaptive, innovative, flexible, by anticipating change and by undergoing seamless transition. All three case companies state that their consultants possesses in-depth knowledge and expertise in business and technology. Hence they can combine their knowledge in business and technology to engender value for organizations

4.4.2.Strategic Change

Evaluation of data related to strategic change management makes it quite evident that the case companies offer strikingly similar services . Services albeit are titled and marketed differently, but if one scrutinizes the offerings in details, one will easily come to conclusion that the core services are quite similar. To elaborate further, the case companies offer change management services during transition phase across all business domains like marketing, finance, accounting, HR, CRM, post-merger and acquisition, relationship management with external stakeholder, IT transition etc.

All three case companies leverage the power IT and data analytics to track and manage strategic change. As a matter of fact, IT is presented as a critical component for change management because it reduces transition cost, facilitates speedy adoption of new operating model and reduces negative impact on business performance during such transition phase. The case companies also emphasize the significance of alignment of IT strategy with business strategy during transition process. The case companies seem to agree that change management is a complicated and tough process. However the companies differ in their perspective regarding why change initiatives fail and they advise clients to focus on quite different critical factors for successful change management.

Accenture states that change management process fails because managers use out-dated approach to address a challenge that is becoming increasingly complex and multidimensional. Transition projects in the current business landscape are quite different from transition projects of previous decades. Due to enterprise wide transformation, companies have to manage not just one change project but portfolio of transition projects. These transition projects give rise to a snowball effect, one change project creates the need for more change projects, ie one change project builds upon itself and becomes bigger and more complex by encapsulating other change projects. However change managers are still relying on traditional approach to managing change and such out-dated approach fails to produce desired outcome.

TCS proposes that transition process fails because strategic objectives are incoherent and often misunderstood and there is lack of alignment between system, processes and business strategy. Cognizant proposes that business transformation projects fails due inappropriate management practises and processes. Additionally, embracing new mind-sets, technologies and processes are inevitable for successful change management .

While TCS essentially focus on hard issues related to change management like alignment of various system and processes and utilizing advanced technology, Accenture and Cognizant also focus on soft issues like transforming mind-set, culture, engaging workforce and engendering motivation. As a matter of fact, Cognizant recognizes that people are a critical factor for success of transition projects . Additionally, in any change management project, people should accept change and undergo transition themselves.

The case companies also differ in their approach regarding how they offer their services related to change management. TCS and Cognizant offer various distinct change management services in small discrete and isolated packages. In other words, different services have been designed for different areas of change. As an illustration, TCS offers various distinct change management services like strategy Alignment, organizational change management, customer experience management. In the same vein, Cognizant offers multiple change management services in several discrete packages like organization readiness assessment, change impact assessment and analysis, communication strategy etc

Accenture is strikingly different in its approach as it offers change management service as one single package . This package has been named as “journey management” because Accenture believes that change management projects invariably involves managing a journey . This journey encapsulates multiple portfolios of change programmes across all areas of business. Hence journey management service manages multiple transition projects across entire enterprise. Journey management is a holistic approach to change management and typically consist of 5 phases :

Investigating the current business environment and identifying the need and drivers for initiating change project, envisioning and articulating the desired future for the organisation with concrete business goals, assessing and identifying the gap between current state and desired state that includes assessment of current strategies, leadership programmes and organizational culture, creating a road map representing this journey of change and prioritizing activities related to change in accordance with organization’s capability to endure impacts of change, monitoring change from current state to desired state by monitoring multiple change projects

4.4.3.Organizational Structure Re-design

All three case companies emphasize the significance of organizational structure that is well aligned with business goals, corporate strategy people, process and technology. Additionally, three case companies leverage IT to re-design organizational structure. As an illustration advanced techniques like Lean, Kanban, Six Sigma , data analytics and site strategy tools are utilized to bring about transformation in organizational design.

Furthermore, Accenture also proposes that companies should have flexible organizational structure. A well designed organizational structure makes an organization more flexible, agile and adaptive to change. The business landscape is dynamic and evolving so it is very important for organizations to maintain a flexible and agile organizational structure. Accenture has analysed multiple internal change group worldwide. On the basis of this analysis Accenture has identified specific key drivers and questions that helps an organization identify the organizational structure that is tightly aligned with their goals.

According to TCS a well-designed organizational structure has coherent competency, skill, accountability and corporate governance. Furthermore, it is also proposed that centralized organization structure is most suitable for organizations pursuing omni-channel strategy. Organizational structure re-design service is also offered within core service of business design and improvement. Generally speaking, business architecture ,business process management and , operating models are assessed to re-design organizational structure.

Cognizant proposes that a well-designed organizational structure is well aligned with a company's strategic goals and business strategy and goals and strategy vary greatly from company to company. As an illustration, gaming industries are unique and complex because they possess unique strategic goals like high levels of customer engagement, customization and interaction. Brand image and hype also plays a strategic role in success of gaming industries.

Hence organizational structure for gaming industries will be quite unique and different from traditional industries. The core services included within organizational re-design service includes governance model creation, assessing the influence of transition on organizational structure, developing an efficient organizational structure that operates effectively after transition, determining various roles that needs to be eliminated or altered after transition

4.4.4.Strategic Partnership

Generally speaking the case companies hold quite similar opinion regarding the significance of strategic partnership. In other words, all three case companies state quite explicitly that strategic partnership is an important source of competitive advantage. Additionally the companies also propose that strategic partnership engenders sustainable positive outcome for all partners and stakeholders. Furthermore, strategic partnership is a potent tool for managing volatile business environment, people and processes. Additionally, all three case companies leverage the power of IT to develop, implement, monitor and manage strategic partnership and alliance.

The case companies are strikingly similar in their approach regarding how and why they develop global network of partners. To elaborate further, all three case companies have developed global alliance with major technology players thereby creating strong network of partners. When clients purchase “IT strategy” and consultancy services from case companies, they automatically acquire access to this network of global partners . Clients can harness the power of latest technology, software and training directly from partners to strengthen their business strategy. On the basis of the data currently available, it seems fair to suggest that the case companies have formed strategic partnerships with global technology players with the aim of helping clients to maximize their business performance.

Clients, when they seek consultancy services from case companies automatically enter into partnership relations with major global players. The case companies have also designed special “partner programmes” that facilitates joint learning, training and knowledge transfer between partners. Partner companies combine their knowledge, experience and expertise to create new services and solutions to enhance business performance. Additionally, clients get access to development software, advanced IT architecture and configuration related assistance. Partners also get access to resources for developing and selling unique solutions.

Accenture and TCS explicitly portray themselves to clients as strategic partners. In other words, clients when they seek consultancy and IT services from Accenture and TCS automatically enter into an partnership relation with them. Company - client relationship is essentially a strategic partnership for these two companies. However, Cognizant is quite different in its approach towards company-client relationship and does not portray itself as strategic partner for clients.

TCS and Cognizant divide their partners into several distinct groups like premium partners, solution partners, strategic partners etc and advertise it quite explicitly in their web pages. However Accenture does not divide its partners into separate groups. Nonetheless, the case companies possess several common partners like Microsoft, HP, IBM, Dell etc. All three case companies have received various awards for excellence in partnership management and they advertise it quite proudly in their websites.

All three case companies are actively involved in humanitarian work, sustainability and social responsibility projects. However what is interesting is that only Accenture explicitly portrays itself as strategic partner for NGO's and humanitarian agencies. As a matter of fact, Accenture has special team dedicated for this purpose; Accenture Development Partnerships team (ADP) has developed strategic partnership with NGO's and humanitarian agencies . ADP leverages the power of IT to respond to global crisis and solve humanitarian problems like the challenge of child under-nutrition, hygiene and livelihood etc.

4.4.5. Decision Making Under Uncertainty

The case companies are strikingly similar in their approach towards decision making under uncertainty. All three case companies propose that decision making under certainty is a very complex and challenging process for managers because one has to consider multiple futuristic scenario, multiple models and multiple trends. Additionally the accelerating nature of change coupled with complexity, globalization and virtualization has made uncertainty an unavoidable aspect of business. Companies however, can mitigate uncertainty to a great extent by leveraging the power of IT. Generally speaking, all three case companies offer big data and predictive analytics services for its clients and claim that analytics and data can improve decision making process during uncertainty. Additionally, predictive analytics can reduce or even get rid of uncertainty.

Accenture websites states that while the significance of holistic thinking and flawless execution cannot be undermined, what is equally important is that insights are validated by data. In other words, under uncertain conditions, decision making should be data driven. Additionally analytical processes (eg big data and predictive analytics) should be well embedded within the organization. Accenture calls this process as “analytics enabled decision making”.

In the same vein, TCS proposes that under uncertain and volatile conditions, decision makers should not rely on gut feeling and intuition. Telecom companies should embed predictive analytics in their business processes and decision making should be based on predictive analytics. Predictive analytics is the process of distilling and deducing relevant information from structured and unstructured data and utilizing such information for determining patterns and predicting future trends. Predictive analytics uses a number of techniques to predict future like data mining, machine learning and statistical modelling.

On the basis of data currently available it can be conferred that the case companies help clients in reducing uncertainty associated with decision making by identifying and highlighting emerging trends and by predicting patterns that might emerge in future. The case companies have big client base who are leveraging the power of IT (especially Big Data and predictive analytics) to make complex decisions under uncertain conditions. Clients include investment banks, marketing firms, FMCG, government, mobile operators, gaming companies, telecom companies, Ngo's and global business leaders .

4.4.6.Performance Measurement and Goal setting

The case companies adhere high importance to performance measurement and state quite explicitly in their web pages that measuring performance, setting goals and setting up appropriate metrics is very significant for success of business strategy. The entire business strategy might fail in the absence of appropriate performance management. Their approach towards performance measurement is also quite similar; all case companies have leveraged the power of IT to design various software, tools and platforms . These IT tools are employed to measure performance in accordance with pre-determined goals. The performance measurement tools can be utilized across all business domains like marketing, human resource, IT, finance and sustainability.

Cognizant proposes that there exists an intricate link between measuring performance and managing performance; one will invariably fail to manage something that one can't measure, so measuring performance with right metrics is very important. Cognizant has leveraged the power of IT to develop various performance management tools. Such tools aid business in defining, measuring and managing its performance against strategic goals. Therefore according to Cognizant setting appropriate goals is also very important. Performance management essentially encapsulates various closed loop analytics process that leverages the power of technology.

Accenture, besides offering various performance measurement tools also offers specialized courses related to performance measurement. As a matter of fact, Accenture Academy offers a special course called “Improving Success Using Key Performance Indicators (KPIs) “. This course offers valuable insight, knowledge and expertise to clients regarding development and implementation of KPI to facilitate decision making process. Additionally clients also learn how to leverage KPI’s in reviewing strategy. Accenture’s webpages highlight the significance of KPI’s and state that metrics by measuring performance drives organizational behaviour. However it is very important for organizations to identify and utilize correct metrics. The performance measurement course offered by Accenture Academy helps clients to comprehend measurement concepts, identify KPI’s and overcome various measurement challenges.

While all case companies adhere high importance to measuring non-financial performance, TCS has taken an innovative step in this regard by designing a solution to measure customer engagement. Customer Engagement Solution – Wheel of Engagement leverages KPI’s specially designed for social media and utilizes such information at every stage of consumer lifecycle. This specially designed solution helps clients in measuring the impact of marketing campaigns accurately and precisely and consequently resource allocation process is optimized. Additionally the solution also helps in improving customer-centric communication and in measuring the ROI on customer engagement. Specially designed analytics and KPI’s aids CRM managers in comprehending customer behaviour accurately and it increases customer retention rate.

On the basis of data currently available, it can be conferred that the case companies are quite similar in their view and approach towards performance measurement. In other words the case companies have leveraged the power of IT to design special tools to measure performance. The case companies state quite explicitly that measuring performance is inevitable for success of business strategy. They also offer clear instructions to clients regarding specific measures that needs to be chosen and the rationale behind such choice, the procedure that clients needs to follow to measure performance, interpretation of results, and communication of results.

Themes/Case companies	Accenture	TCS	Cognizant
Portrayal of IT Strategy	<p>Potent tool that can mould, alter and shape future business landscape to engender greater business value.</p> <p>Emphasis on shaping future, new business, operating model and eco-system</p>	<p>Package of “offerings” which aids companies to acquire complete advantage by becoming more agile, innovative, futuristic, cost efficient and adaptive to change.</p> <p>“Outside in” approach to strategy. Emphasis on adapting to business landscape</p>	<p>Package of services that helps companies in attaining excellence in business by planning, monitoring, controlling and measuring performance across all business units.</p> <p>Clients are advised to adapt to change</p>
Strategic Change	<p>Change projects fail because managers use out-dated approach.</p> <p>IT strategy is leveraged to track and manage strategic change.</p> <p>Besides hard issues, soft issues are also considered like transforming mind-set, culture, engaging workforce and engendering motivation.</p> <p>Change management service as one single package : Journey management</p>	<p>Transition process fails because strategic objectives are incoherent and there is lack of alignment between system, processes and business strategy.</p> <p>IT strategy is leveraged to track and manage strategic change.</p> <p>Focus on hard issues related to change management like alignment of various system and processes and utilizing advanced technology</p> <p>Multiple change management services in several discrete packages</p>	<p>Transition projects fails due inappropriate management practises and processes</p> <p>IT strategy is leveraged to track and manage strategic change.</p> <p>People are a critical factor for success of transition projects. Emphasis on soft issues like transforming mind-set and culture</p> <p>Several distinct change management services</p>

Table 5: Cross-case analysis: cases Accenture, TCS, Cognizant

Themes/Case companies	Accenture	TCS	Cognizant
Organizational Structure Re-design	<p>A well designed organizational structure makes an organization more flexible, agile and adaptive to change.</p> <p>IT strategy is leveraged to re-design organizational structure</p>	<p>Well-designed organizational structure has coherent competency, skill, accountability and corporate governance.</p> <p>IT strategy is leveraged to re-design organizational structure</p>	<p>Well-designed organizational structure is well aligned with a company's strategic goals and business strategy.</p> <p>IT strategy is leveraged to re-design organizational structure</p>
Strategic Partnership	<p>Global alliance with major technology players thereby creating strong network of partners. When clients purchase "IT strategy" and consultancy services they automatically acquire access to this network of global partners.</p> <p>Portray themselves to clients as "strategic partners".</p> <p>Company - client relationship is essentially a strategic partnership</p> <p>No division among partners.</p>	<p>Global alliance with major technology players thereby creating strong network of partners. When clients purchase "IT strategy" and consultancy services they automatically acquire access to this network of global partners.</p> <p>Portray themselves to clients as "strategic partners".</p> <p>Company - client relationship is essentially a strategic partnership</p> <p>Divides partners into several distinct groups like premium partners, solution partners, strategic partners etc. and advertises it quite explicitly in their web pages</p>	<p>Global alliance with major technology players thereby creating strong network of partners. When clients purchase "IT strategy" and consultancy services they automatically acquire access to this network of global partners.</p> <p>No such portrayal</p> <p>Divides partners into several distinct groups like premium partners, solution partners, strategic partners etc. and advertises it quite explicitly in their web pages</p>

Table 5: Cross-case analysis: cases Accenture, TCS, Cognizant(continued)

Themes/Case companies	Accenture	TCS	Cognizant
Decision Making Under Uncertainty	<p>Big data and predictive analytics leveraged to improve decision making process under uncertainty.</p> <p>Under uncertain and volatile conditions, insights should be validated by data i.e. decision making process should be “analytics enabled”.</p>	<p>Big data and predictive analytics leveraged to improve decision making process under uncertainty.</p> <p>Clients are advised not to rely on gut feeling and intuition.</p>	<p>Big data and predictive analytics leveraged to improve decision making process under uncertainty.</p> <p>Clients are advised not to rely on gut feeling and intuition.</p>
Performance Measurement and Goal setting	<p>Emphasis on measuring performance, setting goals and setting up appropriate metrics by leveraging IT strategy</p> <p>Offers specialized courses to clients related to performance measurement</p>	<p>Clients are advised to measure performance, set goals and set up appropriate metrics by leveraging IT strategy</p>	<p>Intricate link between measuring performance and managing performance. IT strategy is leveraged to define, measure and manage performance against strategic goals</p>

Table 5: Cross-case analysis: cases Accenture, TCS, Cognizant(continued)

5. Conclusion

The main objective of my study was to deduce how major IT consultancy firms co-ordinate and leverage IT strategy to reinforce business strategy. To elaborate further, my main focus was to identify key themes within strategic IT services offered by case companies to sustain and reinforce business strategies. Additionally the thesis also aimed at identifying how the case companies describe IT strategy to potential clients because this description ultimately elicits client’s interest and motivation in business-IT alignment. The secondary focus of this thesis was to study the case companies comprehension and approach towards strategic themes related to IT strategy and how they diverge and converge from each other.

The main research question for my thesis was “How do the case companies leverage and align IT strategy to sustain business strategy?”. Furthermore, I developed three main sub-

questions to seek concrete and succinct answers to my main research questions. These questions were :

1. How do the case companies elucidate, portray and describe IT strategy to potential clients
2. What are the key themes within strategic IT services offered by case companies to sustain and reinforce business strategies
3. How do the case companies comprehension and approach to strategic themes related to IT strategy diverge and converge from each other

I commenced the thesis by introducing the readers to various literature related strategy, IT and their intricate connection for superior business performance. To elaborate further, I discussed about the origin and evolution of the term strategy and various strategic themes significant for business. Additionally I also acquainted the readers with information technology and its intricate connection with superior business performance.

The research methodology chosen for this thesis was qualitative multiple case study. This case study is likely to be labelled as extensive case study research because I studied and compared multiple cases and my main aim was to map common underlying pattern and themes present in all cases. The empirical research section mainly comprises of three parts : description of case companies elucidation of IT strategy to potential clients, a thematic content analysis of various strategic IT services offered by case companies to sustain and reinforce business strategies, and cross case analysis of three case companies.

A closer look at the data yielded by the study indicates that the case companies describe IT strategy as tool, formula or package of services that helps companies in pursuing and attaining superior competitiveness. While, Accenture depicts IT strategy as a potent tool that can mould, alter and shape future business landscape to engender greater business value, Cognizant portrays IT strategy as a package of “offerings” which aids companies to acquire complete advantage by becoming more agile, innovative, futuristic, cost efficient and adaptive to change. Additionally, IT strategy is also depicted as a tool that can create a roadmap to desired future. TCS depicts IT strategy as a package of services that helps companies in attaining excellence in business by planning, monitoring, controlling and measuring performance across all business units.

The research has revealed that the case companies portrayal and description of strategy is quite similar to academic's description of strategy. To elaborate further, Accenture's depiction and portrayal of IT strategy is quite similar to Shrivastava's (1986) definition of strategy that states that if one visualizes organizations as culmination of continuously reproducing subjects and objects, then organizational strategy can be conceptualized as deliberate actions that brings forth this transformation. Accenture's strategy encapsulates deliberate actions that aids companies to undergo radical transformation to become more agile, innovative, flexible, cost efficient and connected.

Furthermore, Courtney (1997) provides in-depth analysis of strategy formulation under uncertain conditions in volatile and turbulent markets. A strategist can resort to three different "postures" to deal with uncertainty. They can shape the game, they can adapt to the game or they can just reserve their right to play the game in future. In the same vein, Accenture characterizes IT strategy as a tool that can shape the game because the phrase "shape future" is recurrent and intermittent in Accenture Strategy pages. According to Porter (2008,24) a competitive strategy essentially encapsulates a formula regarding the specific way a business will compete, its goals and the policies necessary to achieve those goals. Similarly, Accenture portrays IT strategy as a formula that assists companies to attain their goals.

Grandy and Mills (2004) have forwarded the proposition that strategy encapsulates various activities that strengthens the competitive position of the firm undertaking such actions and encompass planning, monitoring and executing pre-planned operations. In the same vein, TCS depicts strategy as bundle of services that aids companies in planning, monitoring, controlling and measuring performance across all business units.

Cognizant depicts IT strategy as a tool that can create a roadmap to desired future. (Business & IT Strategy Consulting, 2015).The concept of technology as a tool to create roadmap to future or the idea of "technology road mapping" was created and promoted by Motorola during 1970's. This concept was created to facilitate alignment of IT technology with business. This process involves creating visual representation that aids managers to extend their minds and look into the future. (Willyard & McClees, 1987)

All three case companies adopt a forward looking and futuristic approach and discuss about future business landscape and forward planning . However the case companies differ in their view regarding whether IT strategy should be used for adapting to future or shaping future. While Accenture portrays IT strategy as a tool that can help companies in shaping future,

TCS and Cognizant portray IT strategy as package of services that helps companies in planning and adapting to changing business landscape.

The case companies are quite similar in their perception and description of business landscape and they utilize these specific characteristics of external landscape to justify why IT strategy is inevitable for business. To elaborate further, they describe business landscape as complex, turbulent, uncertain, and volatile and under constant transition; therefore IT strategy is inevitable for companies to sustain and maintain competitive advantage in a landscape with volatile and complex characteristics. Additionally, IT strategy is portrayed as a potent tool that can aid companies operating in this turbulent landscape to be more agile, adaptive, innovative, and flexible, anticipate change, enable radical transformation, lower cost, and increase efficiency. In the final analysis it can be conferred that the case companies elucidate, describe and portray IT strategy as inevitable for success of business strategy and naturally this portrayal elicits client interest in business-IT alignment.

Furthermore, my study also provides important insights on key themes within strategic IT services offered by case companies to sustain and reinforce business strategies. In essence, the research data appear to suggest that the key themes within strategic IT services are strategic change, organizational structure re-design, strategic partnership, decision making under uncertainty, performance measurement and goal setting.

Evaluation of data related to strategic change management makes it quite evident that the case companies offer strikingly similar services. Services albeit are titled and marketed differently, but if one scrutinizes the offerings in details, one will easily come to conclusion that the core services are quite similar. To elaborate further, the case companies offer change management services during transition phase across all business domains like marketing, finance, accounting, HR, CRM, post-merger and acquisition, relationship management with external stakeholder, IT transition etc. All three case companies leverage the power IT and data analytics to track and manage strategic change. As a matter of fact, IT is presented as a critical component for change management because it reduces transition cost, facilitates speedy adoption of new operating model and reduces negative impact on business performance during such transition phase.

Furthermore, all three case companies emphasize the significance of organizational structure that is well aligned with business goals, corporate strategy people, process and technology. Additionally, three case companies leverage IT strategy to re-design organizational structure.

As an illustration advanced techniques like Lean, Kanban, Six Sigma , data analytics and site strategy tools are utilized to bring about transformation in organizational design.

Generally speaking the case companies hold quite similar opinion regarding the significance of strategic partnership. In other words, all three case companies state quite explicitly that strategic partnership is an important source of competitive advantage. Additionally the companies also propose that strategic partnership engenders sustainable positive outcome for all partners and stakeholders. Furthermore, strategic partnership is a potent tool for managing volatile business environment, people and processes. Additionally, all three case companies leverage the power of IT to develop, implement, monitor and manage strategic partnership and alliance.

The case companies have developed global alliance with major technology players thereby creating strong network of partners. When clients purchase “IT strategy” and consultancy services from case companies, they automatically acquire access to this network of global partners and clients. Clients can harness the power of latest technology, software and training directly from partners to strengthen their business strategy.

Furthermore, the case companies propose that decision making under certainty is a very complex and challenging process for managers because one has to consider multiple futuristic scenario, multiple models and multiple trends. Additionally the accelerating nature of change coupled with complexity, globalization and virtualization has made uncertainty an unavoidable aspect of business. Companies however, can mitigate uncertainty to a great extent by leveraging the power of IT. Generally speaking, all three case companies offer big data and predictive analytics services for its clients and claim that analytics and data can improve decision making process during uncertainty. Additionally, predictive analytics can reduce or even get rid of uncertainty.

Besides, the case companies adhere high importance to performance measurement and state quite explicitly in their web pages that measuring performance, setting goals and setting up appropriate metrics is very significant for success of business strategy. The entire business strategy might fail in the absence of appropriate performance management. Their approach towards performance measurement is also quite similar; all case companies have leveraged the power of IT to design various software, tools and platforms. These IT tools are employed to measure performance in accordance with pre-determined goals. The performance measurement tools can be utilized across all business domains like marketing, human

resource, IT, finance and sustainability. Furthermore, the case companies also offer clear instructions to clients regarding specific measures that needs to be chosen and the rationale behind such choice, the procedure that clients needs to follow to measure performance, interpretation of results, and finally communication of results.

5.1. Case companies approach to key themes within strategic IT services and Academic Research.

It is quite interesting that the case companies' comprehension and approach to key themes within strategic IT services is strikingly similar to academic research on similar strategic themes. To elaborate further, scholars agree that the dynamic and evolving nature of business environment has rendered strategic change inevitable in current business landscape. Burgelman (1994) compares business landscape with nature where evolution and dynamic changes renders old competencies obsolete and consequently companies are required to undergo mutation, change and evolution to develop new competencies. Furthermore, academics emphasize the significance of middle managers, mental model and cognitive framework of employees during change process .In the same vein, the case companies propose that business landscape is dynamic and evolving and strategic change is inevitable.

While TCS essentially focus on hard issues related to change management like alignment of various system and processes and utilizing advanced technology, Accenture and Cognizant also focus on soft issues like transforming mind-set, culture, engaging workforce and engendering motivation among all employees. As a matter of fact, Cognizant recognizes that people are a critical factor for success of transition projects . Additionally, in any change management project, people should accept change and undergo transition themselves.

There seems to be a consensus among scholars and practitioners that a good organizational design ensures alignment between strategy and structure, dismantles silos and facilitates cross boundary and cross disciplinary interaction and information flow. The star model framework developed by Kates & Galbraith (2007) aids strategists in designing organizational structure by aligning strategy, reward, process, people and structure. The first step in organizational design is to identify organizational capabilities thereby aligning capabilities with overall strategy. In the same vein, the three case companies emphasize the significance of organizational structure that is well aligned with business goals, corporate strategy people, process and technology. Additionally, the case companies leverage IT to re-design organizational structure. As an illustration advanced techniques like Lean, Kanban, Six

Sigma , data analytics and site strategy tools are utilized to bring about transformation in organizational design. Furthermore, the case companies leverage IT strategy to facilitate cross boundary interaction and information flow on a global scale

Fierce competition and evolving nature of business landscape have made strategic business alliance inevitable for success of business strategy Furthermore, customer centricism, a vital component of all modern organizations requires that the company forms and maintains long term profitable relationship with customers. A customer centric/solution centric organization forms multiple alliance teams within the organization (project groups) as well as outside the organization (with high stake customers and partners). (Galbraith, 2002). In the same fashion the case companies adhere high importance to alliance and partnership. To elaborate further, all three case companies have developed global alliance with major technology players thereby creating strong network of partners. When clients purchase “IT strategy” and consultancy services from case companies, they automatically acquire access to this network of global partners. Furthermore, Accenture and TCS explicitly portray themselves to clients as strategic partners. In other words, clients when they seek consultancy and IT services from Accenture and TCS automatically enter into an partnership relation with them.

Scholars agree that strategic decision making under uncertainty is a very complex and risky process, nonetheless an inevitable one .(Kaplan, 2008 ; McAfee, 2012) McAfee (2012) elaborates how big data is revolutionising decision making process and how managers no longer need to rely on gut feeling and intuition during decision making process. A team of MIT scientists have collected conclusive evidence to prove that companies who effectively utilize big data perform better financially compared to companies who don't.

In the same vein, all three case companies propose that decision making under certainty is a very complex and challenging process for managers because one has to consider multiple futuristic scenario, multiple models and multiple trends. Furthermore, the case companies propose that decision making under uncertainty should be data driven and not based on intuition or gut feeling. Companies , can mitigate uncertainty to a great extent by leveraging the power of IT. Generally speaking, all three case companies offer big data and predictive analytics services for clients and claim that analytics and data can improve decision making process during uncertainty.

Scholars propose that performance measurement and goal setting are intricately linked with each other and plays a significant role in success of strategy. In order to measure

performance, goals should be pre-determined and set in advance. Furthermore, it is very important to measure performance because it indicates progress towards pre-determined goals. The balanced scorecard is a potent strategic management tool that facilitates performance measurement process. (Sinclair & Zairi,1995 ; Kaplan and Norton,1996).

In the same fashion, the case companies adhere high importance to performance measurement and state quite explicitly in their web pages that measuring performance, setting goals and setting up appropriate metrics is very significant for success of business strategy. The entire business strategy might fail in the absence of appropriate performance management. Their approach towards performance measurement is also quite similar; all case companies have leveraged the power of IT to design various software, tools and platforms to set goals and measure .performance.

However, it was quite surprising that the case companies and Ordonez et al., (2009) diverge on an important issue. Ordonez et al., (2009) develops the claim that goal setting has both beneficial and harmful effects and former is often over emphasized and the latter in completely undermined. Consequently various harmful effects of goal setting are highlighted. However, the case companies only discuss about positive effects of goal setting. On the basis of the data currently available from the case companies website, it seems fair to suggest that the case companies do not lend support to the claim forwarded by Ordonez et al., (2009).

Henderson and Venkatraman (1993) state that alignment should be achieved at both internal and external level. Similarly, the case companies assert that business strategy should be aligned with IT strategy both internally and externally. External alignment ensures that business and IT strategy are in harmony with industry and business landscape while internally IT strategy should be aligned with infrastructures and organizational processes.

5.2.Scope for further Research

IT has become an integral aspect of business. Infact, business and IT have become so intertwined that it will not be an exaggeration to state that without IT, it will be impossible to run a business profitably. IT plays a strategic role in all business, in small business IT is present in the form of computer or laptop while in multinational corporations IT is present in the form of information database, mainframe computer, predictive analytics, big data, data mining, software like SAP and ERP etc.

Research has provided conclusive evidence that proves that organizations that align IT strategy with strong business strategy achieve and sustain growth and profitability. Information technology strengthens business strategy and aids strategists to become more analytical and future oriented by providing the required data, applications and software. Additionally various research conducted in this area has revealed that strategically oriented organizations design and manage impeccable IT strategy. (Bergeron & Raymond, 1995).

My thesis mainly focussed on deducing how three major IT consultancy firms headquartered in three different continents co-ordinate and leverage IT strategy to reinforce business strategy. A qualitative multiple case study was conducted for the purpose of this thesis and the data for this research was collected from various secondary sources. As my thesis is mainly restricted to secondary data, in future it would be quite interesting if a research on business –IT alignment is conducted by utilizing primary data. Such data can be accumulated via interview, observation or a combination of both. To elaborate further, a researcher can follow and observe the daily lives of leading IT consultants and deduce important insights related to alignment of IT strategy and business strategy.

Besides several important questions have crossed my mind during the research process and I believe that these questions might provide innovative ideas for future research in this domain. As an illustration, what are the important factors that needs to be taken into account to ensure that the business-IT alignment process is rapid and complete. What kind of role does employee's culture, mind-set, educational background and mental model play during the alignment process? Is the business-IT alignment process more successful if it is incremental and emergent? I believe that these questions will provide interesting topic for further research.

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