

e-BUSINESS MODEL COMPONENT INTERCONNECTIONS

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I hereby certify that all material in this dissertation which is not my own work has been identified and that no work is included for which a degree has already been conferred on me.

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Abstract

The accelerating growth of e-business and technologies has raised the interest in transforming traditional business models or developing new ones. Most of the e-business model research has been devoted to giving taxonomies of e-business models. Though defining e-business model and decomposing it into atomic elements traditionally has been a task for researchers, the concepts surrounding them have been subject to debate lately. While there is an extensive research conducted towards identifying and analyzing key components in e-business models, limited research has been noted in identifying component values or factors and the interconnections between components. In this thesis we review the e-business models literature using literature study in order to give an overview of e-business model definitions, identify the component values and interconnections between components and finally a framework provided that shows all these components, values and interconnections.

Key Words: e-business models, components, value, interconnections, ICT.

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1 INTRODUCTION

This dissertation is about e-business models, with a main focus on e-business model component interconnections. An e-business model is one specialization of a business model. e-Business model is termed with various names in the literature. Some of them are, Business models on the web (Rappa, 2003), Internet business models (Afuah & Tucci, 2001), B2B and B2C Business models (Alt & Zimmerman, 2001), Business model for electronic markets (Timmers, 1998).

e-Business poses significant challenges for organizations as it affects both how organizations relate to external parties (customers, suppliers, partners, competitors and markets) and how they operate internally in managing activities, processes, and systems (Hayes & Finnegan, 2002). e-Business can be defined as utilization of information and communication technologies (ICT) to support all activities of business (Davis, 2004). e-business allow business enterprises to transmit and receive information by use of electronically enabled communication networks (Falk, 2005). e-Business domain consists of e-business environment, e-business, e-business infrastructure and e-commerce.

The e-business environment include economic, political and social sphere which form the backdrop for organizational change stimulated by information and communication technology (ICT) in all sectors. Within e-business, e-commerce happens to occur only in trading between firms and customers using ICT for external relationships and activities (Davis, 2004). Information and communication technologies reflects the convergence of IT and communications systems (Lyons, 2005). It consists of hardware, software, data and communication technology (Davis, 2004). Benefits from ICT are realized when ICT investment is combined with organizational changes, such as new business strategies and practices. ICT increase efficiency and productivity through improved customer service, reduced and streamlined business processes (Falk, 2005). e-Business model is a plan in which a firm will be in a state of busy in doing something that serves final product which is made to earn profits and revenue by using ICT and the Internet. Business is a state of busy for a person or firm¹. Business is fundamentally concerned with creating value and capturing returns form the value (Shafer et al, 2005). Model is a preliminary work, construction that serves as a plan from which final product is made¹. Model is an artificial representation of reality (Shafer et al, 2005; Petrovic et al, 2001).

The commercialization of the Internet during the 1990's has brought much attention to business models. Traditional business models are changing into electronic business models by use of change models, change methodologies, technological sophistication through ICT (Linder & Cantrell, 2000). e-Business model concept is useful in explaining the relation between information systems and strategy. It is the term often used to describe the key components of a given business and mainly used in e-business research

¹ www.dictionary.com

(Hedman & Kalling, 2003; Osterwalder & Pigneur, 2002; Afuah & Tucci, 2001; Weill & Vitale, 2001).

Information Systems can be used within each e-business model components to enhance value chain activities, competitive pricing, customer relationship management, partner relationship management and to gain competitive advantage through low cost and differentiation (Hedman & Kalling, 2003).

The motivation for studying e-business models for researchers within literature is varying and is dependent on their research background. Pateli & Giaglis (2004) identified eight potential sub-domains of e-business model and they are: definitions, components, conceptual model or framework, adoption factors, change methods, evaluation measures, design methods and tools. According to Pateli & Giaglis (2004), traditional researchers, (Rappa, 2003; Linder & Cantrell, 2000; Timmers, 1998) have focused on taxonomies of e-business models and change models, whereas current research is focused on two potential sub-domains within e-business models and they are: definitions for e-business models and specifying the key components in the literature. In this research work, we have dealt with the most focused sub-domains of e-business research. Within the definitions for e-business model sub-domain, our focus is on giving an “overview of e-business model definition”. In components sub-domain, our main aim is on “identifying key components, values and interconnections” and finally we develop a framework based on these key components, their values or factors and interconnections.

This dissertation is organized as follows: The section 2 describes motivation, problem area, expected result and related work. Section 3 provides the research approach and the method to study the specified problem. Section 4 provides an overview of e-business models. In this section, definitions of e-business model components are defined, a table showing the list of components is tabulated (table 2) and analysis of key component values is described. Section 5 deal with key components values. The interconnections between the identified components using their values are given in section 6. In section 7, a framework for e-business model component values and interconnections is proposed (figure 2). Results and conclusion are provided in section 8. Future work of this dissertation is dealt in section 9.

2 MOTIVATION

This section describes the importance of e-business model and the components linkages. “*Running a profitable e-business model is always a continual challenge*” (Martinez, 2000). The continual challenges of e-business model are adopting emerging technologies, dealing with security issues over transactions, the issues of trust, change methodologies, the alignment of information systems with firm resources. Firm’s e-business model significance can be increased only when they identify, develop and use information systems to improve activities in a way to increase its profits and revenue (Hedman & Kalling, 2003). “*Strategies and Business models have to be adopted more frequently due to changes induced by accelerating technological innovations*” (Winter, 2003). e-Business models vary among firms with respect to key components. Finding the key components of an e-business model and fit between these components is a key issue for any firm’s success (Afuah & Tucci, 2001).

Business models mainly help in making better decisions and has become recently popular, especially in the domain of e-commerce and e-business. e-Business models can serve as a positive and powerful role in corporate management. “*Much talk revolves around how traditional business models are being changed and the future of e-business models*” (Alt & Zimmerman, 2000).

In the literature it is evident that research in e-business models is still under process and need to be explored well. Pateli and Giaglis (2004) specified that e-business models component sub-domain ranks second in research popularity. Considerable amount of work on identifying the key components is performed till today (e.g., Shafer et al, 2005; Morris et al, 2005). *Components* are parts that constitute an e-business model. Research within components sub-domain mainly deals with decomposing e-business models into atomic elements. There are various approaches to define a component and as addressed by Pateli & Giaglis (2004), they are: Hierarchical decomposition (top-down analysis), Matrix analysis (vertical and horizontal dimensions) and value analysis (based on value). The definitions and the names of the proposed components by several researchers vary with respect to different approaches.

Interconnections between components deal with the logical flow of value between components, how each component affect other component. Within the popular components sub-domain, less research work is performed for finding the interconnections between the key components. Researchers those who gave the interconnections between key components didn’t consider much about the nature of connection between the components. e-business model success mainly depends on the fit between components, how each component is defined, how each component is related to other component (Morris et al, 2005; Shafer et al, 2005; Osterwalder & Pigneur, 2002; Afuah & Tucci, 2001; Hamel, 2000). In this dissertation, we are primarily focused on considering the less debated interconnections aspect between e-business model components within the components sub-domain. The next section describes the problem area: component interconnections.

2.1 PROBLEM AREA

From the motivation it is clear that there are underlying areas that are still need to be explored, and we focus on the aspect of component interconnections of e-business models. Although there seems to be a relative consensus when it comes to identifying the constituent elements of an e-business model, the elements of e-business model are given by various names and definitions in the literature. Limited research has been conducted towards identifying the logical flow of value between components that is the order in which each component is defined and how each component affect the value of other components (Morris et al, 2005; Pateli & Giaglis, 2004).

Hayes and Finnegan (2003), refer e-business model components as activity. They inform that there exist some linkages where one activity affects another in terms of cost-effectiveness, trade-offs and optimization.

So far in the literature the definitions were mostly based on describing, or including components as an essential aspect in defining an e-business model (Osterwalder & Pigneur 2002; Afuah & Tucci, 2001; Amit & Zott 2001; Weill & Vitale, 2001; Linder & Cantrell 2000; Hamel, 2000; Timmers 1998). As discussed in the motivation section, although there has been some work in describing the linkages between e-business model components (Osterwalder & Pigneur, 2002; Afuah & Tucci, 2001; Hamel, 2000), there is lack of research on how the quality of linkages can be raised? What all values are needed for strengthening the links between components? What must be the nature of linkages? How linkages will be affected by factors associated with components of an e-business model? How ICT and the Internet have their role in each of these components?

This research work focuses on addressing the important aspects of e-business model key components and their linkages. Thus, aim of this dissertation is:

“Identifying the e-business model key components set, values associated with these key components, interconnections between set of components and finally providing a framework for showing the values and interconnections between e-business model components”.

2.2 EXPECTED RESULTS

The expected results of this work are as follows:

1. *An overview of e-business models:* This provides an in detail explanation of e-business models, the purpose of e-business models, its constitution and the possible actors. The successful definitions presented by various researchers are also presented.
2. *Values and interconnections between components:* Values and interconnections between e-business model components are presented and is a major contribution of this work.
3. *Framework for these e-business model components:* The final result where a framework depicting the e-business model interconnections is proposed. The framework deals with e-business model components, their possible classification, values associated with them and their interconnections.

2.3 RELATED WORK

There has been considerable progress within the area of e-business models although the research within this area began recently. Much of the previous works of e-business models were in defining e-business models, the possible roles, components, technological issues, the role of Internet and types of e-business models. Very few researchers have studied the e-business model components and component relationships. They are: Morris et al (2005) “The entrepreneur’s business model: Toward a unified perspective”, Shafer et al. (2005) “Powering the business models”, Osterwalder & Pigneur (2002) “An e-business Model Ontology for modeling e-business”, Afuah & Tucci (2001) “Internet Business Models” and Hamel (2000) “Leading the revolution”.

Hamel (2000) presents a framework for describing the components of business model. It contains four major components and each component is further divided into other sub-components. The four major components are connected by three connections and are termed as bridge components. The framework provides an in detailed view of each component but the relationships are shown between the major components and are called as bridge components. He has described several components and also the value associated with each component.

Osterwalder & Pigneur (2002) provide an ontology for e-business model where they describe e-business model issues and their relationships. Their ontology is based on four pillars or elements as in Hamel's framework. The four pillars are: Customer relationship, Product Innovation, Infrastructure Management and Financial aspect. Each of these pillars in turn contains several other components. The fourth pillar (Financial aspects) can be found in each of the former components. The relationships are given within each pillar that is the relationships between each element of a specific pillar are found and finally all the four pillars are connected. The components and relationships are shown within each pillar and between the pillars.

Afuah & Tucci (2001) describe that a firm can raise the quality of linkage between components depending on the linkages (strong or weak) of the competitor firms. This work only address on some aspects of component linkages. Still further study is needed on how to raise the quality of links and effect of each component with respect to others.

The above discussed researchers have their own way of defining each component. Shafer et al (2005) followed a different approach for defining and describing components of an e-business model. They have used an affinity diagram for providing components of e-business model and successful definition for an e-business model, keeping in view of diverse definitions and varied components that are available in the literature. This affinity diagram contains four major categories namely strategic choices, creating value, capturing value and the value network. The categories contain components that are identified from the table of components (Table 1: Shafer et al, 2005, page 201). The table contains forty two components taken from twelve e-business model definitions addressed

by successful authors during the years 1998-2002. The components that are addressed two or more times in the table are clustered into categories of affinity diagram. This approach of classifying and clustering components of e-business model based on various definitions available in the literature helps in defining a relative set of components of e-business model.

In a similar fashion, Morris et al (2005) identified six components (termed as factors) needed for e-business model and it does not have the concept of interconnections between the components. He proposed a framework based on three levels: foundation level, proprietary level and rules level. In each of these levels six decision areas are considered.

3 METHOD & RESEARCH APPROACH

3.1 METHOD

Qualitative research and analysis provides the intricate, the most relevant, and the problematic details of the phenomenon that can be used to formulate the questionnaires of a quantitative research (Glaser, 1992). The e-business models research is quite recent and after the commercialization of the Internet, research in e-business models progressed at a rapid pace. A qualitative research is adopted to fulfill the aim.

Within this qualitative research method, literature study is chosen to study the research problem. For this, the first step is data collection where related data from recent literature to the most cited ones is collected. The literature that is collected constitutes papers from research institutes, well known authors in the area of e-business models, books from authors (such as Davis, 2004; Afuah & Tucci 2001; Hamel, 2000).

The second step is data analysis, where data is analyzed on how e-business models are presented in the literature in terms of strategy, Internet, plan or architecture for a firm etc. From the data analysis, the concepts, ideas and materials related to the problem are obtained. In the data analysis, data is valuable because through data, ideas are stated about what is going on? (Stephen & John, 1992) The data is analyzed to give an overview of e-business models, identifying component values and interconnections and finally developing a framework for visualizing all component interconnections.

3.2 RESEARCH APPROACH

The approach for studying the specified research problem is a three phase process. Results from each phase are used as active drivers for obtaining the results in the next phase. Result 2 is to obtain agreed components set. It consists of two parts: 2a and 2b which are intermediary results. In result 2a, a table of components list (table 2) is drawn based on previous works from the literature. This table of components list (table 2) is further analyzed to obtain the agreed component set, result 2b.

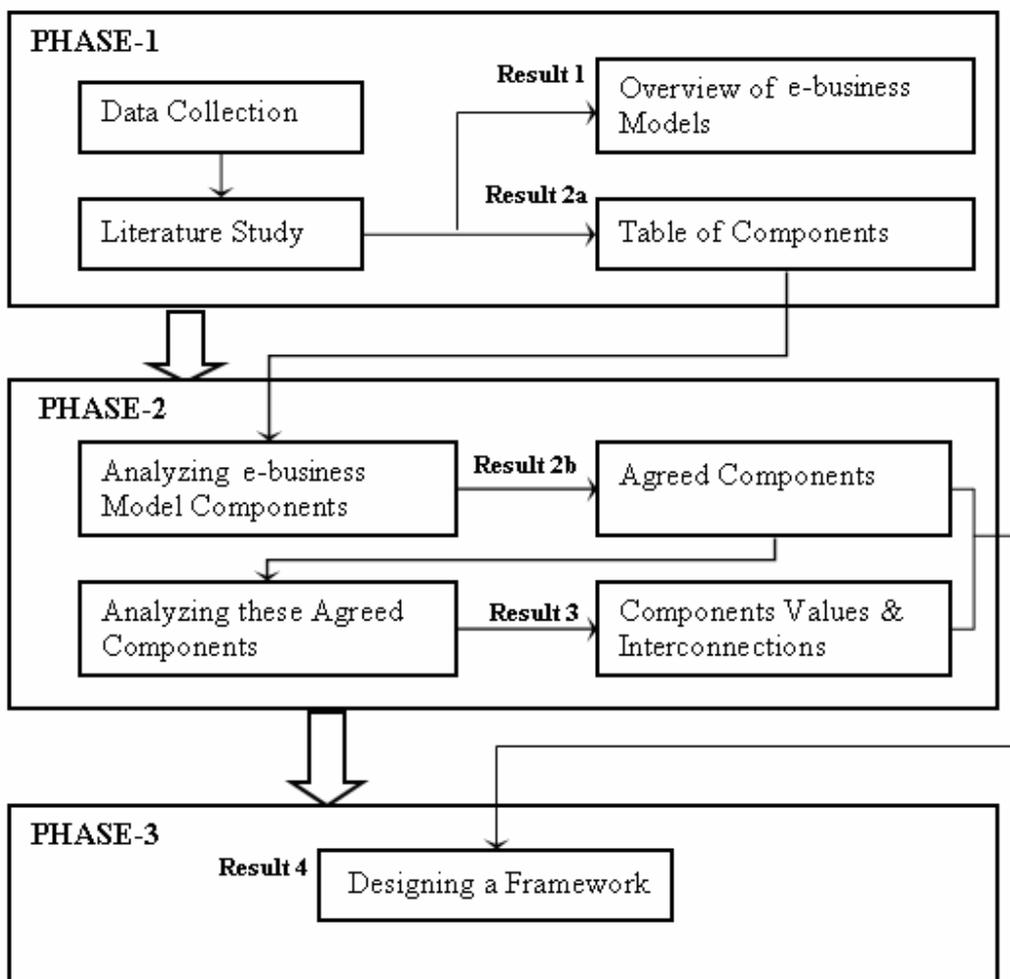
Phase 1: In the first phase, data is collected and a literature study is done. This results in giving an overview of e-business models (result 1) and a list of components (result 2a) containing all the components addressed by different authors. The list of components (table 2) serves as a basis in phase 2 for obtaining an agreed component set (result 2b). Both result 2a and result 2b combined to form the result 2, that obtains an agreed key components set.

Phase 2: The phase 2 has two parts. In the first part, agreed components (result 2b) are obtained by analyzing the components from result 2a. The components from result 2a are analyzed such that components having different names but having similar definitions are clustered and considered as one key component of an e-business model. This process is continued to group all the components specified in the table (result 2a) and finally an agreed set of components are obtained.

In the second part, the agreed components are in turn used for finding the logical flow of value between components by conducting a detailed study on these set of key components. The logical flow of value is the order in which each component is defined and used in e-business model. In this process, the factors or values associated with each component are obtained and then the interconnections between these key components are drawn.

Phase 3: A framework describing the interconnections, values and key components are identified from result 2b (the agreed set of key components) and result3 (component values and interconnections).

Figure 1: Research Approach



4 e-BUSINESS MODELS

In this chapter we focus on the “e” factor, its role in e-business models, an overview of how e-business model is defined in literature, how the e-business model is related to other concepts of a firm? In the literature, e-business models are often used and defined interchangeably with strategy, business concept, revenue model and economic model (Pateli & Giaglis, 2004; Osterwalder & Pigneur 2002).

The current interest in e-business and e-commerce is a reflection of the increasing importance of informatics to organizational performance both in terms of its internal processes and in terms of its external relations with customers and suppliers (Davis, 2004). The business environment of the new millennium is responsive, dynamic, competitive, and is in a constant state of customer-centered change which is initiated by innovations in information and communication technologies. e-Business is the result of combining the broad reach and vast resources of the Internet with information technology systems (Plessis & Boon, 2004). Many organizations have become reliant upon Information Technology (IT) and Information Systems (IS) to support their business processes (Irani & Love, 2001). Customer orientation of IT, supplier orientation of IT, informational (quality, supply continuity and relationship management) and transactional, internal operation of IT, customer related processes, supplier related processes, customer e-business readiness and supplier e-business readiness., These are the key factors that e-business organizations invest in and commit resources in order to achieve improved operational performance (Mohini & John, 2005).

The difference between industrial age business models and e-business models is the different business rules and assumptions of how business is done? Business rules specify allocations, boundaries and strategies (Morris et al, 2005; Hedman & Kalling, 2003). e-Business model has various definitions in the literature, mainly based on various approaches. Some defined e-business model to explain purpose of model, while others, mostly defined in the terms of primary elements and components (Pateli & Giaglis, 2004). ICT has changed the way by which companies compete and succeed, the business models, and effecting mainly value-creating processes like logistic and networking, marketing and customer relations, innovation development (Carbonara, 2005) .

4.1 e-BUSINESS MODELS OVERVIEW

In the literature there has been diversity in defining e-business models and yet there is no generally accepted definition. This diversity delimits the components of an e-business model, its nature and determining what constitutes a good e-business model (Morris et al, 2005). We will discuss some of these diverse definitions of e-business model (summarized in table1).

Timmers (1998) and Weil & Vitale (2001) (see table1) defined the e-business model as an architecture that shows how various business actors and roles are involved in

producing a product or service. Timmers (1998) further suggests that it is useful for identification of “marketing model” where it is defined as the one with an e-business model and the marketing strategy of the business actor under construction. This identification of marketing model is needed to answer questions of competitive advantage, marketing mix and product-market strategy.

Afuah & Tucci (2001) in their “Internet business models” define business model as a method through which firms conduct their business using the properties of the Internet. The various factors of the Internet that affect e-business model and also key components are given. In turn they show how the Internet shapes the business model in its performance and activities within. Some of the important properties which they address are network externalities, lock-in and universality that affect business model success. These factors underpin many e-business models, mainly market places and effect individual’s production or consumption (Chen, 2003).

Linder & Cantrell (2000) define business models as core logic for a firm and it encompasses specifically three things, organizations core logic, components of business model and change methodologies.

Osterwalder & Pigneur (2002) and Rappa (2003) give e-business models as a method of doing business, earning revenue and profits from value creation. Osterwalder & Pigneur (2002) further describe e-business model as missing link between strategy and business process. They argue that Information system and business process designers have to understand and implement the information formulated by the strategy people. Another way of referring e-business models is in the form of framework for discussing the components of a business concept (Hamel, 2000). Hamel (2000) argues for business concept innovation. In competitive market, competition is between business concepts where this is an idea. This will be used to gain competitive advantage and further it is a capacity to reconceive existing e-business model in ways that create new value for customers and new wealth for investors.

Chesbrough & Rosenbloom (2002), give e-business model as a construct between economic and technical domains. In their work they give an interpretation of e-business model and specifically argue for role of business model in commercializing technologies. Shafer et al (2005) made an extensive review on business model definitions and identifying its key components. Shafer et al (2005) have reviewed 12 definitions of business model from established publications during the years 1998-2002. They offer their definition guided by two principles which is relevant for all sorts of firms irrespective of whether they are using “e” or not. The principles say what the definition must include and how to use this definition. Their definition finally argues for core logic and creating and capturing value within a value network.

Table 1: e-Business Model Definitions

RESEARCHERS	Definitions
Timmers (1998)	<i>“An architecture for product, service and information flows, including a description of the various business actors and their roles ; and a description of potential benefits for the various actors ; and description of the sources of revenues”</i>
Slywotzky (1996)	<i>“Totality of how a company selects its customers, defines and differentiates its offering, defines the tasks it will perform itself and those it will outsource, configures its resources, goes to market, creates utility for customers and captures profits”</i>
Hamel (2000)	<i>“Business model is simply a business concept which is the capacity to imagine dramatically new ways of differentiating existing business concept.”</i>
Linder & Cantrell (2000)	<i>“ The organizations core logic of creating a value “</i>
Afuah & Tucci (2001)	<i>“It is a method by which firm plans to make money long term using the Internet”</i>
Weill & Vitale (2001)	<i>“A description of the roles and relationships among firms consumers and customers, allies and suppliers that identify the major flow of product information, and money and major benefits to participants”.</i>
Chesbrough & Rosenbloom (2002)	<i>“Construct that mediates value creation process. It translates between technical and economical domains”</i>
Osterwalder & Pigneur (2002)	<i>“A description of value of a company offered to one or several segments of customers and the architecture of a firm and its networks of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue streams”.</i>
Rappa (2003)	<i>“Business model is the method of doing business by which a company can sustain itself-that is generating revenue. Business models spell out how a company makes money by specifying where it is positioned in the value chain”.</i>
Shafer et al (2005)	<i>“Representation of firms underlying core logic and strategic choices for creating and capturing value within value network”</i>

From the discussion, e-business model can be viewed as follows:

- Architecture for product or service, description of business actors, roles and relationships, and a method for use of resources to deliver value to customers

differentiated from its competitors using the properties of the Internet and ICT (Afuah & Tucci, 2001; Weil & Vitale, 2001; Timmers, 1998).

- Core logic of firm (Linder & Cantrell, 2000) or a business concept (Hamel, 2000) on which all other activities, elements are constructed.
- One that provides choices for value creation at the same time marketing the value and earning profits and revenue from the value through electronic means, where this value can be product (physical or electronic) and services (Shafer et al, 2005; Rappa, 2003; Chesbrough & Rosenbloom, 2002; Osterwalder & Pigneur, 2002; Slywotzky, 1996).

4.2 COMPONENTS

In this section, we deal with component definitions and the types of components given by various authors so far in the literature. This section is an overview about components role in e-business models which is the central part of discussion in this dissertation. Components are atomic elements which has their birth when an e-business model is decomposed. These are the fundamental constructs of an e-business model (Afuah & Tucci, 2001).

4.2.1 Component Definition

Components are parts that constitute a business concept (Hamel, 2000; Linder & Cantrell, 2000). A concept is an idea that is in the minds of a firm where it wants to bring this thing into reality. It is typically a product, service or a value that a firm wants to create and offer to its customers for making revenues (Rappa, 2003). The final aim for a firm is to make profit out of its concept. For bringing this concept into picture, firm needs to decide on parts or elements required. These elements are formulated in an architecture that shows how this concept is brought into reality and strategic choice to firm (Osterwalder & Pigneur, 2002). We view this architecture as an e-business model.

When we speak of components, it has varied definitions. In software and technology domain, it is defined from a component based framework's perspective where components based framework solutions are partial implementations specifying the nature and way to extend the framework with pluggable components (Larsen, 2000). From this perspective a component is defined as "a physical and replaceable part of a system that confirms to and provides the realization of a set of interfaces" (Larsen, 2000).

In e-business model literature, components are given with various names by various authors, like elements (Alt & Zimmerman, 2001), and pillars (Osterwalder & Pigneur, 2002). e-Business models are decomposed into atomic elements in order to have a picture on the essential parts of an e-business model, definitions of e-business models (as done by Osterwalder & Pigneur 2002; Afuah & Tucci 2001; Weill & Vitale 2001; Hamel 2000; Timmers 1998), and specification based on business perspectives (Weill & Vitale 2001). Some even defined the e-business models by specifying components as functions or attributes. They defined that these functions collectively serve additional functions, namely to justify financial capital needed to realize the model and to define a path to

scale up the business (Chesbrough & Rosenbloom, 2002). An interesting case in defining components is given by Petrovic et al, (2000). They define components as functions or sub-models of an e-business model are logic behind corresponding “processes”. When people talk about business model, they could be speaking about three distinct things: components of business models, real operating business models and change models (Linder & Cantrell, 2000). Components aren’t really complete business models at all, but are just pieces. e-Business model components range from value propositions to organizational structures and arrangements for trading relationships where each may be an important piece of a business model but not the whole thing (Linder & Cantrell, 2000).

In this research work, we interpret components as atomic elements of an e-business model. Components are parts that are essential for a firm in order to create, deliver and earn profits from value and are only a part of e-business models. These are activities involved in value creation (Osterwalder & Pigneur, 2002; Afuah & Tucci, 2001).

4.2.2 List of Components

Table 2 describes the types of components given by different authors. The rows represent component names, while columns represent the respective authors. The components given by each author are clubbed together in the rows. In the previous sections, it has been shown that the key components names, definitions and e-business model definitions are varying from author to author in the literature. Keeping in view of this consideration, a table is constructed to find the key component set and the interconnections between the key components of an e-business model. For this purpose, we have included components defined by various authors who are mainly involved in case studies, empirical research, various interviews with executives and much cited.

The cross marks in the table maps a component on x-axis to an author in y-axis. A cross mark in a cell represents that a particular component is defined by a particular author.

The table 2 is used as a base for analysis section. The components in the rows are analyzed to group them as one component which has same meaning but different names in the table. The table is first constructed based on the different component names given by each author. Later in the analysis section this table is analyzed to bring out a common set of components based on the component definition given by each author.

Table 2 (a): List of Components

COMPONENTS	AFUAH & TUCCI 2001	ALT & ZIMMERMAN 2001	CHESSBROUGH & ROSEBLOOM 2002	GORDJIN et al 2001	HAMEL 2000	HEDMAN & KALLING 2003	LINDER & CANTRELL 2000	OSTERWALDER & PIGNEUR 2002	PATELI & GIAGLIS 2004	PETROVIC 2001	TIMMERS 1998
1. Mission, Business Mission		x			x				x		
2. Target Market (Scope)	x				x				x		
3. Value Proposition			x				x		x		x
4. Resources						x			x		
5. Key Activities						x			x		
6. Cost & Revenue Model									x		
7. Customer Value	x										
8. Value Chain Net			x						x		x
9. Structure		x									
10. Pricing , Pricing Structure	x				x						
11. Revenue Source	x										x
12. Connected Activities	x										
13. Implementation	x										
14. Capabilities	x										
15. Sustainability	x										
16. Processes, Core Processes		x									
17. Revenue		x									
18. Legal Issues	x										
19. Technology	x										
20. Pricing Model							x				
21. Revenue Model							x				
22. Channel Model							x			x	
23. Commerce Process Model							x				
24. Internet enabled Commerce							x				
Relationship											
25. Organizational Form											
26. Value Network			x								
27. Target Customer						x					x
28. Feel & Serve											x
29. Activity Configuration											x
30. Partnership Network											x

Table 2 (b): List of Components

COMPONENTS	AFUAH & ALT & TUCCI 2001	ZIMMERMAN 2001	CHESBROUGH & GORDON et al 2002	ROSENBLOOM 2002	HAMEL 2000	HEDMAN & LINDER & KALLING 2003	CANTRELL & FIGNEUR 2000	OSTERVALDER PATELI & GIAGLIIS 2004	PETROVIC 2001	TIMMERS 1998
31. Information							x			
32. Trust & Loyalty							x			
33. Value Model								x		
34. Resource Model								x		
35. Production Model								x		
36. Customer Relationship Model								x		
37. Capital Model								x		
38. Market Model								x		
39. Basis Of Differentiation					x					
40. Core Competencies					x					
41. Strategic Assets					x					
42. Cost Structure				x			x			
43. Fulfillment & Support					x					
44. Information & Insight					x					
45. Relationship Dynamics					x					
46. Profit Structure					x		x			x
47. Suppliers					x					
48. Partners					x					
49. Coalition					x					
50. Resource & Assets							x			
51. Buyers										x
52. Customer Ownership										
53. Value Object										
54. Price Setting										
55. Casualty of Revenue										
56. Market Segment										
57. Value Activity										
58. Competitive Strategy										
60. Offering										

4.3 ANALYSIS

The list of components table (table 2) is the basis for finding key component values and interconnections between them. A framework for describing key components, values and interconnections is derived from the agreed set of key components. To obtain an agreed set of key components, the components from the table 2 (section 4.2.2) are clustered based on their definition given by the authors in the corresponding columns. If two or more components definitions are same or components that agree on same definition, then all those components are considered as one cluster and is given a name. This process is iterated until all the components in the table 2 are reduced to their corresponding clusters where components in each cluster share same definition (or meaning). We use these clusters as the key components set. The components set that we obtained from table 2 are: mission, target market, value proposition, value chain, capabilities and resources, channel, partner networks, revenue and pricing, customer value, and implementation.

We use these ten components as key components of an e-business model in this work. For these components, corresponding values or factors and interconnections are found in the coming sections (section 5 and section 6). Finally in section 7, a framework will be provided for describing all these components values and interconnections.

5 COMPONENT VALUES

In this section the values associated with components that are identified from list of components table (table 2) are described. Component values are nothing but factors or attributes associated with a component and are used synonymously in this dissertation. We interpret component value as some thing that decides the quality or worth of a component. Hence component values are the factors that decide or raise the quality of a component and also contribute to the quality of component interconnections. In the case of value chain and value proposition components, we refer value as a product or service.

5.1 MISSION

The first step in defining an e-business model starts with the mission of a firm. This captures the overall objective of a strategy, that is, what the e-business model is designed to accomplish? It encompasses things such as value proposition, strategic intent, purpose and goals (Hamel, 2000). Deciding how well information systems must be used, aligned with resources of a firm is a key issue in firms mission (Hedman &Kalling, 2003). The central idea is that an information system must ‘fit’ its organizational context: the organization, its strategy, its processes and its environment for better performance (Davis, 2004). The mission statement provides the guiding direction for developing strategy, defining critical success factors, searching out key opportunities, making resource allocation choices based on information systems, and pleasing customers or stakeholders (Dumas and Blodgett, 1999). Information collection, storage, analysis through ICT and dissemination of this information to other systems regarding markets where the firm wants to compete are established at very earliest stages of the mission preparation process (Richard and Brett, 2004). Firm's mission mainly depends on understanding the *business landscape* (Richard & Brett, 2004) and its *creative thinking* (Edward, 1990; Hamel, 2000).

1. Business Landscape: One of the important aspects to deal with business mission is to consider business landscape. When devising plans for battle, knowledge of ground is crucial and hence understanding the business landscape is similarly important. It includes the potential market and its behavior, social changes, the impact of government policies, the impact of innovations, ICT and the behaviors of competitors, technological changes, and the possible dynamism of all these make an outline of all of which may impact on decisions made by the mission planners (Richard & Brett, 2004).

2. Creative Thinking: Creative thinking to dominate competitor tactics is also a crucial thing. Without creative thinking, everyone find himself looking at the situation in the same way and reacting in the same way (Edward, 1990). This creative thinking is given as “*business concept innovation*” by Hamel (2000) which is a key in creating new wealth. e-Business model is simply a business concept and *business concept innovation* is the capacity to imagine dramatically different business concepts or dramatically new ways of differentiating existing business concepts (Hamel, 2000). Superior market innovation capabilities are potential foundations for sustainable competitive advantage since an

innovation in one firm is not easily duplicated in another. These are complex; rely on tacit skills and learning (Hooley et al, 2005; Lyons, 2005). e-Business applications like knowledge management foster a culture of innovation and creativity which is a key element in ensuring alertness for an e-business (Plessis & Boon, 2004).

Hence ICT help firm's mission by providing superior innovation capabilities through e-business applications like customer relationship management and knowledge management, information about markets, support aspects of information systems in assessing the fit with firm's context (Davis, 2004; Carbonara, 2005). Information technology (IT) boosts the efficiency and effectiveness of the decision-making process executives in most firms as an integral part of their products, their customers, and their business mission or strategy (Kamssu et al, 2003).

5.2 TARGET MARKET

The target market of a firm address for which customers (demographic or geographic) is the value offered? (Afuah & Tucci, 2000) What is the range of products / services offered that embody this value? It captures the essence of where the firm does or does not compete, which customers, geographies, what product segments (Osterwalder & Pigneur, 2002). To operate in an e-business environment, an organization must have a good command of knowledge on its markets, customers, products and services. Knowledge management provides the business with a better understanding of the market it plays in, enabling the e-business to match buyers and sellers in new value added markets and thereby positioning itself in the market (Plessis & Boon, 2004). Target market mainly depends on the value offered and market orientation.

The target market of a firm depends on various factors. Possible factors or value that influences in assessing the target market are: *product segment* (Afuah & Tucci, 2001), *market orientation* for identifying the consumer needs (Blesa & Bigne, 2005).

1. Market Orientation: Market orientation is defined as the coordinated behavior of the different functions of the organization aimed at seeking and gathering information from consumers, the competition and the environment; distributing this information throughout the organization; designing and implementing a response in accordance with the information obtained; all based on the identification and construction of distinctive organizational capabilities, with a view to satisfying consumers by providing them with higher value (Blesa & Bigneu, 2005). ICT plays key role in information collection and storage. Customer relationship management helps in obtaining information about customer perceptions.

2. Market segment: Firms task on making decisions on target market is not limited to choice of market segment and it must also decide how much of the needs of the segment it can profitably serve (Afuah & Tucci, 2001). With the arise of the Internet and its universality property makes firms to reach any geographical location (Afuah & Tucci, 2001) and thereby also gives a chance to market to entirely new customer segments (Osterwalder & Pigneur, 2002). The connectivity of the Internet lays the foundation for

rich information exchange between customers and firms, asymmetry of information between economic agents is reduced (Amit & Zott, 2000).

The Internet technology and the related trading models (business-to-business and business-to-consumer) provide reduction of time to market, allocation of brand image, market share and access to markets, customer orientation (Carbonara, 2005). With the use of ICT, the value proposition is offered to target market (Osterwalder & Pigneur, 2002).

5.3 VALUE PROPOSITION

A value proposition is simply an evaluation of efforts compared to its cost and valuation which can be made in reference to indirect benefits or direct benefits. A value proposition is really the sum of all that goes into an effort (Jeffery, 2000). One small difference in how a company attracts its customers or delivers on its value proposition can make its e-business model substantially different from another firm (Linder & Cantrell, 2000).

A bundle of products and services together form a value proposition (Osterwalder & Pigneur, 2002). Every business is based on value proposition – “value that is proposed and consumed by customers” (Tapscott, 1999). It contains number of elements that are aggregated from suppliers and employees and delivered to customers (Tapscott, 1999). Cost element (price effort and risk), the role of customer (buyer, user, co-creator of the value) and performance of value proposition are considered as subcomponents of value proposition (Osterwalder & Pigneur, 2002).

Value proposition is mainly dependent on *cost element* (Osterwalder & Pigneur, 2002; Linder & Cantrell, 2000) and *marketing* elements (Fairchild, 2003; Osterwalder & Pigneur, 2002; Linder & Cantrell, 2000; Tapscott, 1999) which are main factors and may decide on how efficient a value proposition must be which is to be offered to target customer using the firm’s capabilities and resources.

1. Cost element: The cost element is based on price, effort and risk taken by a firm in developing a product or offering a service (Osterwalder & Pigneur, 2002). As given by Linder & Cantrell (2000), the examples of a value proposition with cost element are: Products offered at “less value and very low cost”; “more value at the same cost”; or “much more value at greater cost”. As for a company, it is either competing on price or on quality. These examples signify the efforts and risks made by firm in delivering the value proposition to the customer. Cost element is one of the aspects where a firm competes in the competitive environment.

2. Marketing: Marketing means exposing firm’s value to customers, magnifying the value proposition to customer (Timmers, 1998). Linder & Cantrell (2000) presented a set of value propositions that leverage multiple aspects of customer relationship to magnify the value to customer called as “interlocking value proposition”. The components of interlocking value propositions are vetted advertising, competitive ranking information, by-product community and trading opportunities. Marketing the product through electronic is much faster, cheaper and can be done in efficient way than any other mechanisms (Bharat, 1999). A firm’s product success depends on how well it has been marketed. ICT enrich the opportunities for the promotion of goods and services and for

the provision of in-depth information by dealing with, and delivering great amount of information (text, graphics, sound and video) in different ways (Carbonara, 2005).

ICT helps in reducing time to markets, delivering new value propositions to geographical customers, promotion of goods and services, for delivering varied value proposition (high value at low cost, value-added services, etc) based on customer profile obtained through information collection.

5.4 VALUE CHAIN

Value chain concept was first proposed by Porter (1985) as a means of identifying each of the business actions or stages that transforms inputs into outputs (Walters, 2004). As defined by Porter (1985), “*it consists of strategically important company functions or activities that create both costs and customer value*”. Porter’s value chain model has been widely adopted by practitioners and extensively studied by researchers (Chang, 2005). Porter’s value chain model consists of two activities, a primary activity and a support activity. The primary activities (micro view) include inbound logistics, operations, outbound logistics, marketing/sales and customer service. The support activities (macro view) include organizational infrastructure, human resource management, technology development, and procurement for each of the primary value chain activities (Porter, 1985; Walters, 2004). The concept of value chain is driven by increasingly sophisticated and prevalent information technologies, particularly the Internet changing the market dynamics and allowing new value chains to form with new coalitions, products and services in the market (Chang, 2005). A key emphasis within informatics recently is to design information systems around processes rather than structures or functions. Processes are the means by which value is delivered to a customer. Developing information systems around the so-called value chains has the potential to deliver radical improvements in organizational performance (Davis, 2004). The conventional value chain differentiates inbound logistics and outbound logistics as two distinctive chain elements. In the Internet age there is no distinction between inbound logistics and outbound logistics of value chain and hence, both are considered the same (Chang, 2005). In the information age, it is termed as virtual value chain in which value is deconstructed and reconstructed in forming new value chains that can be new revenue generating sources (Timmers, 1998).

The main things which alter a value chain or the values that influences a value chain are: *Linkages, dynamics* in addition with (Rayport & Sviokla (1999)) three stages of *information process*, where a company adds value within market space, which means commerce through electronic means (Rayport & Sviokla, 1999).

1. Linkages: Firm’s competitive position is affected not only by the set of linkages within the company’s own value-chain activities, but also by the value chain linkages between buyers and suppliers. It is important in light of the growing recognition that relationships are embedded in broader industrial network (Nordberg et al, 2003). With the Internet, the speed and accuracy between supplier, buyers and customers are increased (Bidgoli, 2002). The creation of value within value chain is dependent on the links

between the activities of the firm's value chain. Each link is dependent on the other and the strength of the value chain is dependent on the strength of these links. Effect to one link may cause decline of whole chain (Walters, 2004).

2. Dynamics: The advent of the Internet and electronic commerce is changing the role and dynamics of the value chain. Traditionally the value chain has been dealing with the customer service. In the electronic age there is a need for a different view more than a simplistic view. A dynamic view of value chain is needed (Walters, 2004). Customer perceptions change at any time and in the Internet era everything is dealt dynamically. Hence constant focus of market dynamics is needed for shaping the product, satisfying and at the same time attracting customers at every possible step (Chang, 2005).

3. Information Process:

Companies adopt value adding information process in three stages of market space, they are: visibility, mirroring capability and customer relationships. We explain these three stages of market space given by Rayport & Sviokla (1999) and relate these three stages by online newspaper example taken from Kruger et al (2003).

Example: In the case of newspaper, in traditional value chain, the information is collected from reporters, then it is edited and various contents are set. Afterwards the bundled contents are sent to the publishing department for printing and finally distributed to customers through logistics. In the electronic means, the contents of newspaper are divided (value chain deconstruction) and mixed in various ways, there by forming new value chains and kept available online. The firm collects money by subscription model where customers subscribe to the online news paper. This kind of delivery has benefits of low cost, fast delivery, time saving and the customer can subscribe to only those parts of contents in which he is interested instead of traditional means where the customers is supplied with all the contents. In this way a firm can create different ways of earning profits and also giving dynamic access to customers to pay only for those parts in which he/she is interested and this also increases the number of customers.

Rayport & Sviokla's (1999) three stages of information process where a firm adds value in market space are given below:

a. Visibility: Companies can acquire an ability to see physical operations of a firm more effectively through information. Managers use large scale information technology systems to co-ordinate activities in their physical forms and in process lay foundation for virtual value chain (Rayport & Sviokla, 1999). In the above example, through the use of information technologies, newspaper firm collects up-to-date information from any corner of the globe through the use of the Internet.

b. Mirroring capability: Companies substitute virtual activities for physical forms of a firm. They begin to create a parallel value chain in the market space. This is nothing but in conventional value chain, the product is dealt in all the activities where by value is added at each stage and finally delivered to customer. In the virtual value chain, the activities of actual value chain are identified, represented by information and new value

chain is reformed by combining information elements. Timmers (1998) describes it as a value deconstruction, where the actual activities of value chain are identified and are represented by information patterns. In value reconstruction, the integration of information processing is done across various activities of value chain. Firms must possess an efficient mirroring capability in identifying a variety of value chains involving core processes and this will benefit for a firm in increasing its revenues. See example for illustration of value deconstruction and reconstruction.

c. *Customer Relationships*: Business uses IT to establish new customer relationships. Managers draw on the flow of their information in their virtual value chain to deliver value to customers in new ways. As explained in the above example, customers are given access and can subscribe to only those parts where she/he is interested and at the same time saving costs for both customer and the firm. This kind of delivery gives a firm more independence and there by can even reach more customers. Further e-business applications like knowledge management enables customer relationship management through the creation, sharing, harvesting and leveraging of knowledge of firm's customers. Customer relationship management is about managing customer relationships on firm level through understanding, anticipating and managing of customer needs, based on knowledge gained of the customer, to increase firm's effectiveness and efficiency and thereby increasing profitability (Plessis & Boon, 2004).

ICT and the Internet medium, thus has a major impact on value chain. New value chains are created based on market dynamics which are sources of revenue through value deconstruction and reconstruction (Timmers, 1998). Customer relationship is enhanced through customer relationship management, and knowledge management. Accuracy between suppliers, buyers and customers are increased through ICT and the Internet (Bidgoli, 2002).

5.5 CAPABILITIES & RESOURCES

In the literature, the definition of terms "resources" and "capabilities", "competencies" are used interchangeably but each differ in order. These represent the tangible and intangible assets of the firm in developing strategies. Tangible resources include those factors containing financial or physical value as measured by the firm's balance sheet. Intangible assets or strategic assets (Hamel, 2000; Afuah & Tucci, 2001) include factors that are non-financial or non-physical in nature and are not found in a firm's balance sheet (for example, copyrights, patents, registered designs and trademarks, Held-in-secret technology, etc) (Galbreath, 2005). Firm's competitive advantage is defined by its capabilities, resources or competencies and firm's strategy planning can be seen as main driver of competitive advantage (Nicholas & Abby, 2004). Economic value is determined by a firm's ability to trade and absorb information system (IS) resources, to align them with other resources, to diffuse them in activities and manage the activities in a way that creates an offering at uniquely low cost (Hedman & Kalling, 2003). For effective contributing performance, information system must be acquired cleverly, fit with other

resources and should be implemented effectively. The relationship between capabilities and a firm's performance is studied by taking into consideration of various perspectives such as resource-based view (Gautam et al, 2004; Kathleen & Jeffrey, 2000; Barney, 1991), dynamic capabilities (Teece et al, 1997), knowledge based and organizational learning theories. Most of the literature surrounds around resource based view and dynamic capabilities. Resources of a firm are physical assets, specific assets that are difficult to imitate, human capital tangible and intangible factors that a firm owns. Integration of specific assets leads to competencies which are firm's abilities and are fundamental to day-to-day problem solving (Nicholas & Abby, 2004; Teece et al, 1997). Capability is a broad concept with many elements and attributes. It includes skills of employees, the abilities and expertise of the top management layers (Nicholas and Abby, 2004). Within e-business models, ICT capabilities greatly enhance firm's success. The main factors that affect capabilities of a firm are: *dynamic capabilities, core competencies, environmental changes* and *effective teams*.

1. Dynamic capabilities: The Three P's

The dynamic capabilities are processes that use resources to integrate, reconfigure, gain and release resources matching market change. Dynamic capabilities are organizational and as well as strategic routines by which firms achieve new resource configurations (Kathleen & Jeffrey, 2000). As digital networks provide business processes with enormous capabilities for speed, strategy is fast becoming a dynamic process of recreating and executing innovation options to gain and sustain competitive advantage (Teece et al, 1997). Firms add value by creating a distinctive capability through the use of ICT and the Internet technologies, and e-business applications. Here we will present the three P's given by Teece et al (1997). They are: Processes, Positions and Paths. Organizational processes shaped by firms asset positions and modeled by its evolutionary and co-evolutionary paths, explain the essence of the firms dynamic capabilities and its competitive advantage.

- a. Processes:* Processes are referred to the way things are done in the firm, referred as routines. Organizational processes include: 1.Coordination and integration 2.Learning (dynamic concept) 3.Reconfiguration (transformational concept).
- b. Positions:* The current specific endowments of technology, intellectual property, complementary assets, customer base, external relations with suppliers and complimentary are referred as positions. These also include technological assets, financial assets, reputation assets, complementary assets, structural assets, institutional boundaries, market assets and organizational boundaries.
- c. Paths:* Paths are strategic alternatives available to firm, presence or absence of increasing returns. These include path dependencies.

2. Core competencies: Core competencies form higher level than the capabilities and resources. Core competencies are particular processes in firm that play major part in

firm's existence (Hamel & Heene, 1994; Schwaningar & Flaschka, 1995). Processes that define the fundamental business of a firm can also be called as core. These are derived by looking across the range of firms, products and services (Teece et al, 1997). These can be enhanced with appropriate complementary assets. ICT capabilities are also called as a part of core competencies. They also play a major role in developing and supporting core processes of a firm (Carbonara, 2005). Core competencies enable a firm succeeding in strategic business units and also to build up the future strategic business units. It encompasses skills and unique capabilities of a firm and is valuable to customers (Schwaningar & Flaschka, 1995).

3. Environmental Changes: We need to know what resource profile is needed to generate the highest revenue for a firm in a particular industry. In a dynamic and competitive environment, the real source of competitive advantage is underlined by the firm's ability to consistently meet environmental changes, as well as to change the industry structure. Here the environment is business environment and there is a potential rise of new entrants, competing at every level of business. In the competitive environment in which business enterprises operate, information systems (IS) investments have become a key factor in coping with the environmental changes and taking advantage of the opportunities they offer (Escobar, 1998). Firms must build its competitive strategy on its core assets, processes with relation to environmental opportunities and threats (Carmeli, 2004; Barney, 1991). Core capabilities are "capabilities that differentiate a company strategically, fostering beneficial behaviors not observed in competitors". There are two main reference points against which capabilities can be calibrated to check their potential to become core: the competitive environment and the business mission of the firm which is also relevant for identifying core capabilities (Andreu & Ciborra, 1996).

4. Effective Teams: The cross functional teams, human resources, and skilled personal teams also contribute to firms capabilities. Human resources are one of the important capabilities of the firm (Schwaningar & Flaschka, 1995). Product development involves routines that ensure concrete and mixed experiences from team members like working together to fix problems. Mixed people help in making things differently as different expertise know different things (Kathleen & Jeffrey, 2000; Nicholas and Abby, 2004). Further, modern ICT systems involve integrated voice and data access, enabling real-time working between geographically spread co-workers, who cannot only speak to each other, but also access and share a wide variety of information. In this way the teams and team members can work from various geographical locations (Lyons, 2005).

Thus ICT and information systems within this component deal with aligning resources of a firm, creating dynamic capabilities, dealing with environmental changes, supports teams, human communication activities within a firm and core processes of a firm.

5.6 CHANNEL

Channel is the way a firm "goes to the market" and how it actually "reaches" the customer? (Osterwalder & Pigneur, 2002; Hamel, 2000). Channel can be of two categories, direct channel and indirect channel. Direct channel involves use of the

Internet and ICT which made new ways of reaching the customer and avoiding geographical barriers, whereas the indirect channel is the use of intermediaries, retailers and middlemen (Matear et al, 2000; Bharat, 1999). At present, we find three types of distribution channels, they are: traditional distributional channel (retailing), direct selling (e-tailing) and hybrid distribution channel (mix of both retail and e-tail) (Webb, 2002; Bharat, 1999; Falch, 1998). The core of distribution channels are transactions and exchange processes. Channel support also includes aspects of sales force training, technical assistance, marketing know-how, promotional support, after sales service (Matear et al, 2000). With the use of the Internet and ICT, electronic ordering and delivery of a wide range of products has been taken up by a large number of business actors providing goods and services via the network (Falch, 1998).

1. Multiple Channels: In the literature, it is much argued in favor of multiple distribution channels (Bharat, 1999). Since direct selling doesn't provide look and feel, it is better to have other forms of distribution channels in addition with e-tails. Multiple distribution channels provide firms with multiple ways of marketing, more customer segments, more focus on target markets (Bharat, 1999; Webb 2002). In online world, the factors that affect a firm's channel are: confidence and customer support.

2. Confidence: It is quite noticed and one of the shortcomings of dot-com companies that too in the information age is lack of confidence in on-line products and services (Falch, 1998). The aspect of confidence is lack of commitment, absence of look and feel of physical object (Matear et al, 2000). It stems from time asymmetry and information asymmetry (Falch, 1998). Time asymmetry brings notion of risk involved to each agents involved in the transaction. Information asymmetry arises where the physical product is not examined and only a representation of it exists. These things may lead to uncertainty regarding its quality. Firm must ensure and bring some sought of confidence in customer. Falch (1998) further explains the things that raise the level of confidence e.g., brand name. Guidance and assistance through goal setting and training are important for overall performance especially for high technology products where customer service and information is necessary (Matear, 2000).

3. Convenience and Comparison: Consumers on the web are getting smarter in using e-tails for convenience and comparison-shopping. Majority of the customers look for price comparisons and product comparisons using online search engines. Providing such comparisons can magnify firm's value proposition to customer. Hence providing online cost and quality comparisons and others such as online guides, customer responses can attract customers with their company websites (Bharat, 1999).

4. Customer Support: It is needed especially when a firm has a hybrid distribution channel for selling their physical products (e.g., www.amazon.com, www.gap.com). In this case, the Internet acts as a tool in bringing both customer and firm together. Customer support gives competitive advantage, plays increasing role in bringing success of new products, a major element in IT firms. The two aspects of customer support include design for supportability techniques at design stage and logistics of delivering customer support through suitable channels (Goffin, 1999).

ICT, IT and the Internet technologies within this component provide support, marketing for direct selling of goods and services (e-tails and hybrid distribution channels), for customer support, quality comparisons, and electronic ordering of goods and services.

5.7 PARTNER NETWORKS

“Partners supply critical components to final products” (Hamel, 2000). B-webs (Tapscott, 1999) or e-business models depend on partners to maximize return on capital. Partnerships help firms leverage costs, can lower its costs and strengthen its market position. Partnerships can be of integrated relations or strategic alliances, service contracting or online platforms (Osterwalder & Pigneur, 2002) in delivering value proposition to the customer. Integrated alliances include pooling of resources and skills in order to achieve a coordinated goal (Jones et al, 2003; Tapscott, 1999), service contracting is the one where one firm’s offers service for other company thus gaining mutual profits, basis for core developing core competencies, online platforms that include buy-side, where selling company (example: supermarket, electronic goods store) display products from other firm's for sale (Davis, 2004; Jones et al, 2003). Knowledge management provides the structure, tools and processes to provide one single interface with multiple business partners. e-Business provides an electronic Internet based platform to allow firm’s customers, its supplier partners and employees to collaborate with another through the sharing of data, information and knowledge (Plessis & Boon, 2004). Partnerships and alliances leads to learning, growth for the partner’s involved and successful deployment of product where one company strategy uses other company strategy.

1. Mutual Benefit: Partnering strategies aim at mutual benefits, and co-ordinate effort. Good partnering occurs when there are mutual benefits to the firms involved. Partner networks are usually connected in upstream value chain (Porter, 1985; Tapscott, 1999; Hamel, 2000). Another benefit of partnering is, firms entering into new markets having alliance with brand companies can market their products efficiently. Internet provides new marketing strategies and channels for marketing firm’s products (Carbonara, 2005). Partnerships with brand companies help a firm to get a quick recognition from customer’s side, thereby increasing its awareness and existence in the markets (Hamel, 2000; e.g., in the case of Microsoft, where Independent Software Providers, write software to Microsoft and Microsoft advertise these ISP’s, giving its share. Thus both benefit mutually).

The Internet channel provides firms with superior marketing strategies to market its products and services through partner networks, allow collaboration with employees and its supplier partners through electronic Internet based platforms (Plessis & Boon, 2004).

5.8 REVENUE & PRICING

Revenue and Pricing define the economic structure of a firm. They are mainly dependent on high volumes, high operating leverage, low margins and a fixed revenue source. Revenue sources mainly depend on the pricing mechanism, firm’s ability to identify

various sources of revenue implemented through a variety of pricing mechanisms (Morris et al, 2005; Linder & Cantrell, 2000)

A revenue model refers to the specific ways in which an e-business model enables revenue generation, describes the logic of what, when, how and why the company receives compensation in return for the products? Within “e” age, some of the ways to generate firm’s revenues are: subscription fees, advertising fees and transactional income. Revenue models are primarily concerned with value allocation (Amit & Zott, 2001; Cherbourg & Rosenbloom, 2001; Petrovic, 2001). The value propositions of a firm are translated into revenue stream that can have different pricing mechanisms. Through the Internet and ICT new pricing mechanism (auctions, pay-per-view, number of clicks, etc) can be enabled to maximize revenues (Osterwalder & Pigneur, 2002). Rappa (2003) identified a variety of e-business models where each signifies different kinds of revenue models and hence there exists a variety of revenue sources where firms can use.

Internet marketing can significantly impact the nature and degree of customer price sensitivity. Pricing determines the profits from the value offered. The main factors that decide pricing mechanism are *market share*, *dynamic pricing* mechanisms and *distribution channel* (Dong-Quing & John, 2005; Lancioni, 2005; Afuah & Tucci, 2001; Marsh, 2000; Shankar et al, 1999). Firm needs a comprehensive pricing plan in which all the key component areas like price timing, price execution, price control, price setting and price implementation, value added mechanisms are included. The value-added component in pricing is demonstrated in four areas: product availability, form utility, the level of research and development and quality (Lancioni, 2005).

1. Distribution Channel: Within distribution channel, price sensitivity is influenced by channel intermediary factors (Shankar et al, 1999). Goods when sold online are charged less when compared to goods sold through intermediaries, and traditional distribution channels. The pricing of goods sold through traditional distribution channels vary from country to country, government taxes and logistics, value added services provided by the retailers (Dong-Quing & John, 2005). Through e-tail, Internet distribution channels, costs of marketing are reduced, price comparisons can be done and product or service can be offered at a low price to customer.

2. Market Share: Business organizations overtly invest in information systems for one of two reasons: to be more efficient, usually by increasing productivity, or to be more effective. This normally attempts to increase the market share of a business (Davis, 2004). Firm’s market share in the market also decides pricing. When firm enters into new markets, it alters its pricing mechanism to attract customers. The strategies that a firm takes in new markets provide a product at low cost; a free product is offered where price for the associated products is charged, and effective marketing. In this process, a firm initially pays high costs but as the market share increase with time, pricing strategies can be improved and can reduce costs there by leading to profits and building brand name (Afuah & Tucci, 2001). The pricing plan must be coordinated with the other activities involved in market planning. In addition, firm needs to analyze marketing opportunities; researching and selecting target markets with the help of ICT; designing new Internet

marketing strategies; planning marketing programs; and organizing, implementing, and controlling the marketing effort (Lancioni, 2005).

3. Dynamic Pricing: Afuah & Tucci (2001) classified dynamic pricing into five major types. It includes menu pricing (seller sets a price), one-to-one pricing (seller negotiates price with buyer), auction (seller solicits many bids from the buyer), reverse auction (seller fulfills the orders of buyers), and barter (swapping of good for goods). The cost of a product depends on one or more pricing types, type of business a firm does, type of product or service offered.

Through the Internet medium and marketing, customer perceptions on price sensitivity towards firm's products and services are obtained, price comparisons can be done, costs can be reduced and value for customers can be offered at lower price, new pricing mechanisms can be enabled to maximize revenues through ICT. Investments in Information systems enhance firm's efficiency and effectiveness thereby increasing its market share.

5.9 CUSTOMER VALUE

One of the major components and a main area in e-business model is to build customer value. Customer value means the factors of *trust*, *loyalty* and *quality* which are crucial to any firm doing business. The Internet and ICT helps companies to achieve better customer relationships (Lee, 2003). ICT is a major catalyst for developing and implementing customer relationship management. At the same time, marketing firm's products and services heavily depend on collection and analysis of customer information (Sigala, 2005). Customer value is considered central to competitive advantage and long-term success of business organizations (Khalifa, 2004). The value of customer satisfaction is particularly important in case of services that are intangible. Value-based/value-focused strategies increase likelihood of success for firms from this perspective (Slywotzky, 1996; Rahman, 2004). Total customer value can include functional value of the product, service value, emotional value, social value and conditional value (Zineldin, 2005).

1. Trust: Trust depends on customer's point of view that a service provider's service meets their expectations. "*Customers do not purchase products, they purchase promises of services*" (Rahman, 2004). Human aspect (customers) form the core in all virtual organizations, firms that conduct e-business through integration of ICT, networks and knowledge. One of the important elements within this aspect is trust. Trust and confidence are essential to users of the networked systems. These are intimately linked to consumers' rights, such as identification, authentication, privacy and confidentiality (Mezgar, 2003). Services that form sense of trust are: access control, authentication, confidentiality, integrity and non-repudiation. In addition, firms can raise the level of trust through good management practices, security policies and procedures, correct structures of responsibility and use of IT emergency recovery plans.

2. Loyalty: Loyalty and profits are strongly linked to value created for customers. Customers are loyal to a company as long as it offers them superior value compared to its

competitor (Khalifa, 2004; Rahman, 2004). Changes in the market environment can quickly alter prices and technologies, but close relationships with loyal customers can last a lifetime. Superior value of products/services delivered to customers leads to customer loyalty and the real driver of financial performance (Hamel, 2000; Afuah & Tucci, 2001; Osterwalder & Pigneur, 2002).

3. Quality: Customer relationships are in fact dependent on how well a product and a service is provided and this forms a measure for customer's original expectations of quality (Mosad, 1999). Quality is regarded as one of the few means of service differentiation and competitive advantage and customer retention. It attracts new customers and contributes to the market share (Rahman, 2004). It needs firm to create, establish and develop a good quality mix of products and services in order to maintain and enhance relationship with the customer (Afuah & Tucci, 2001; Zineldin, 2005). Through the Internet and ICT, good quality services can be offered to customers.

Through ICT and information systems customer information can be maintained and insights can be drawn (Timmers, 1999). IT capabilities help in raising the level of trust by dealing with security issues. Data mining, use of database for customer activity and data analysis helps in selecting target customers and to build in relationships with customers (Sigala, 2005).

5.10 IMPLEMENTATION

Implementation involves *structure, systems, people* (Afuah & Tucci, 2001) and environment. Dissemination of information within firm, information management is needed in digital world. Experience and knowledge sharing, system integration ability, and personalization are all aspects of implementation (Shu-Min et al, 2005).

1. Structure: The success of any strategy depends heavily on organizational structure (Jabnoun, 2005). Organization form is an important dimension of corporate strategy that defines where to compete? Which activities to perform inside the firm? (Brews & Tucci, 2004) It determines which roles and agents constitute a specific business community (e.g., value chain) as well as focus on industry, people, customers and products. Organization structure creates the infrastructure to support the implementation of decisions. Within e-business, the organization structure short-lives and at every stage, a new e-business structure emerges at business unit level (Marchand et al, 2000).

Information systems may also contribute to organizational restructuring and may be a means for flattening organizational structures in various ways by removing managerial layers (Davis, 2004). Organizational structure questions the aspects of co-ordination, differentiation (Hamel, 2000; Afuah & Tucci, 2001) and integration. Afuah & Tucci (2001) characterize organizational structures mainly as organic where skilled and technical personnel at higher level are present and mechanistic where the product designers speak directly to marketing employees (Afuah & Tucci, 2001).

2. Systems: Systems must be in place where information flows from the shortest path to right targets for decision making. Within a firm we can find various kinds of systems such as information flow systems (critical to any firm). Information systems and ICT

systems are part of organizational firm (Lyons, 2005). These systems disseminate information to all parts of the firm (Afuah & Tucci, 2001).

3. People: People include employees, consumers and other actors of the firm. Rewarding employees, acquiring skilled personnel are some of the aspects that a firm must do (Afuah & Tucci, 2001). Stakeholder value advocates belief, that a firm has social responsibilities and should go beyond shareholder value creation to encompass other stakeholders such as employees, consumers, and society at large. Stakeholders should be given the opportunity to participate in determining the future direction of the firm in which they have a stake (Khalifa, 2004). Through ICT people at various levels of a firm and at various geographical locations can communicate easily. ICT systems become a core concept in decentralized firms. Within a firm an employee can contact any other employee, manager at high level or low level and thus each has access and communication to all personnel and systems within a firm. This helps firms to have up-to-date information, insights from all employees and also more data can be gathered and in more detail, from anywhere in the company, processed and presented to senior managers (Lyons, 2005).

Hence ICT and Information systems within this components are used to gather information, disseminate information to all levels, units, other systems in firm, for effective communication between firm's people across various geographical locations. ICT systems have significant impact on organizational structure.

6 INTERCONNECTIONS

In this section we show the interconnections between components obtained from the analysis section based on values described in the previous section. Here we use a term called “value block” to address both value proposition and value chain. Firm’s value creation and offering activity can be seen in value block. Hence value block includes all the key activities that enable a value creation process. In the value chain, value is generated at various activity chains. The final outcome from value chain is set of products and services bundled together, which is called a value proposition that is to be proposed to customers. Both value chain and value proposition are involved in value creation and delivery. In this research work, we consider these two things as a block which deals with firm’s value and hence these two things are combined and given the name value block.

6.1 MISSION -TARGET MARKET

When we speak of mission of a firm we deal with target market (Morris et al, 2005; Osterwalder & Pigneur, 2002; Afuah & Tucci, 2001) for which the value proposition (Morris et al, 2005; Osterwalder & Pigneur, 2002; Afuah & Tucci, 2001; Hamel, 2000) that are bundle of products and services or product offered by utilizing its capabilities (Hamel, 2000). ICT help firm’s mission by providing superior innovation capabilities, improving its efficiency and effectiveness. The values of mission are business landscape and market orientation where as the value or factors of target market are market orientation and product segments. Through business landscape (Richard and Brett, 2004) mission sets its ground where it wants to launch its product. For setting its ground, the firm must possess creative thinking (Edward, 1990) or business concept innovation (Hamel, 2000) to define a new business concept to compete with others through differentiated products (Hamel, 2000). ICT firms can acquire superior innovation capabilities and can monitor current market influences or changes through knowledge management (Falk, 2005; Carbonara, 2005). When selecting the target market, market orientation is necessary (Blesa & Bigne, 2005; Hooley et al, 2005). Through product segments firms can focus on the segments that need to compete with the business concept (Afuah & Tucci, 2001). It can be also said to which parts of product segments, a firm’s business concept can apply (Hamel, 2000). Market orientation helps in understanding the business environment of product segment where a firm wants to compete with. It also helps in acquiring capabilities and resources based on information obtained (Blesa & Bigne, 2005; Hooley et al, 2005, Richard & Slade, 2004).

6.2 MISSION -VALUE BLOCK

Value Block contains both value chain and value proposition. Value proposition is offered to a selected product segments. It is characterized as a customer relationship as it forms the heart of business. Customer relationships are managed efficiently through e-business applications and ICT. The firm can gain insights from customer relationship

(Fairchild, 2003; Rayport & Sviokla, 1999). The cost element determines the efforts behind developing product. A firm can propose combinations of value (high or low cost) to target customer based on cost element (Osterwalder & Pigneur, 2002; Linder & Cantrell, 2000). Also, a firm's mission depends on value chain activities, alliances to deliver firm's business concept, suppliers needed, and also support activities (Pateli and Giaglis, 2004; Osterwalder & Pigneur, 2002; Afuah & Tucci, 2001; Hamel, 2000). The value's associated with value chain are linkages (how well the linkages are formed between activities of value chain, coordination between activities and timing), dynamic view (keeping view of customer perceptions), visibility (use of ICT, technologies within physical activities), mirroring capability (mixing of activities, creating new value chains that lead to new sources of revenue and profits through the Internet medium and ICT). All these factors shape a firm's value chain and must be considered in drawing firm's mission (Rayport & Sviokla, 1999).

6.3 MISSION - CAPABILITIES & RESOURCES

The firm's capabilities and resources component is dependent on firm's mission. A firm's business mission is also relevant in identifying the core capabilities (Galbreath, 2005; Nicholas & Abby, 2004; Gautam, 2004; Andreu & Ciborra, 1996). The factors that influence firm's capabilities and resources are dynamic capabilities (Teece et al, 1997), environmental changes, core competencies (Hamel, 2000), effective team (Nicholas & Abby, 2004; Kathleen & Jeffrey, 2000; Schwaninger & Flaschka, 1995). The *processes*, *positions* and *paths* within dynamic capabilities help a firm to view the co-ordination mechanism between personnel, its suppliers, decisions based on its processes of technologies, infrastructure, and routines. A firm can make choices based on available *paths* or strategic alternatives to acquire skills and resources. Environmental changes helps in keeping track of target markets and accordingly acquire new skills and personnel. Core competencies are the key processes, capabilities of a firm that are not possessed by its competitors. Effective teams are based on environmental changes, with varying market segments. ICT capabilities are used at all levels to provide communication, decision making and information to all the business roles and actors.

6.4 VALUE BLOCK - CAPABILITIES & RESOURCES

Capabilities and resources are crucial to all types of value chain activities (Galbreath, 2005; Nicholas & Abby, 2004; Gautam et al, 2004). Value chain component is dependent on capabilities and resources to acquire personnel, skills and teams. The dynamic capabilities, effective teams, core competencies and environmental changes or market changes through ICT's collectively affect the value proposition. The network of suppliers, buyers and firm coalitions amplify firm's resources and this is called a value network (Hamel, 2000). Core competencies play a central role where all other activities of value chain are aligned both electronic and physically. Dynamic capabilities (Teece et al, 1997) help in defining new processes, combination of activities, integration, transformation (*process*), other new alternatives (*paths*) based on market changes, supplier relationships (*positions*). Effective teams (Nicholas & Abby, 2004; Kathleen &

Jeffrey, 2000; Schwaningar & Flaschka, 1995) help value chains by supporting several activities (e.g., In the case of marketing, after sales, skilled persons in developing products, various operating levels, can have active part in projects).

As explained above capabilities and resources form the major source in delivering new value propositions evolved from value chain activities. New resources are acquired based on learning from customer relationships. The cost element of value proposition in turn lets the varieties of value offered to include all types of customers.

6.5 VALUE CHAIN-PARTNER NETWORKS

Partner Networks are helping hands for value chain activities within a value block and also in magnifying value proposition to customers (Jones et al, 2003; Hamel, 2000; Tapscott, 1999). Mutual benefit is the main factor that drives the relationship between partner networks and value chain (Carbonara, 2005; Hamel, 2000). Both parties involve in attaining a common goal. The processes and paths within value chain help in making new partnerships and switch to multiple alternatives causing changes to the market environment.

6.6 VALUE PROPOSITION - REVENUE & PRICING

To convert value proposition into income needs understanding of revenue and pricing mechanisms. Price setting for a product can be decided by obtaining price sensitivity through customer factors and customer relationship management. Dynamic pricing mechanisms are applied based on market share, type of firm, product or service type. New value propositions arrived from virtual value chains can be source of revenue generation. The pricing and revenue for value propositions offered to target markets depends on kinds of distribution channels (Rappa, 2003; Afuah & Tucci, 2001; Teece et al, 1997).

6.7 CHANNEL-VALUE BLOCK

Channel helps a value chain in finding suitable suppliers, provides faster communication through convenience and comparison factors (Webb, 2002; Matear, 2000; Bharat, 1999; Falch, 1998). New distribution channels (e-tails, hybrid channels) has enabled new forms of businesses, and also different types of transition, in delivering new value chains formed from value deconstruction (Bharat, 1999; Timmers, 1998) (See value chain section e.g., online newspaper). A firm can confidently propose a value to more number of customers by raising the customers' confidence in buying products. Relationship with customers can be better enhanced by providing proper after-sales service or customer support.

6.8 TARGET MARKET-VALUE PROPOSITION

The primary function of an e-business model is to articulate a value proposition that requires preliminary definition of the product being offered and its usefulness to a particular customer. This requires an understanding of several issues such as specification

of market segment component, understanding of revenue sources, evaluation of the costs incurred by various pricing mechanisms (Rappa, 2003; Osterwalder & Pigneur, 2002; Afuah & Tucci, 2001; Teece et al, 1997), to develop value and finally efficient marketing strategies to market the value (Timmers, 1998). All these factors help in transforming value proposition into a steady income (Brunn et al, 2002). The relationship between target market component and value proposition is mainly dependent on the customer relationships, cost element through proper orientation of market and selected market segments.

6.9 MISSION-CUSTOMER VALUE

Customer priorities are the base for a firm's mission. Firms approach from mission to value creation in accordance with customer needs to select target market, understand customer needs, and accumulate processes, skills and activities based on customer priorities (Dumas & Blodgett, 1999; Farquhar & Langmann, 1999). Trust is an important factor for a firm that does its business electronically (Rahman, 2004). Loyalty is obtained through good customer relations and quality is the measure at each level of a firm (Khalifa, 2004; Rahman, 2004; Osterwalder & Pigneur, 2002; Afuah & Tucci, 2001; Hamel, 2000).

6.10 VALUE BLOCK-CUSTOMER VALUE

Customer value is a scale on which all other elements of an e-business model evaluate themselves. All elements try to align with customer value. The value that is proposed to the customers via online depends primarily on trust, loyalty and quality (Zineldin, 2005; Khalifa, 2004; Rahman, 2004; Afuah & Tucci, 2001; Farquhar and Langmann, 1999). One of the major concerns in conducting online business is to deal with security (trust in transactions over the Internet). Ensuring secure transactions, using security technologies, services and measures are essential in raising the level of trust (Mezgar, 2003). Quality of value can be improved through ICT capabilities, online medium factors and efficient logistics. Customers will be loyal to company as long as the company delivers value proposition of superior quality through safe and secure transactions.

6.11 MISSION - IMPLEMENTATION

Implementation of a firm mainly depends on organizational structure (Afuah & Tucci, 2001). ICT and information systems form a significant part of an organization. When framing a firm's mission, the organizational structure (centralized, decentralized or outsourcing some of its functions), type of system (transaction based systems, information flow systems, ICT systems, etc.) and people (employees, skilled personnel) must be considered. Firm's can decide the organizational structure needed for value creation by considering business landscape and market orientation. Based on the selected market segments, firm's can decide the systems that can be included and people who are in need such that the firm can deliver value to all the target markets (Jabnoun, 2005; Richard & Brett, 2004; Marchand, 2000).

7 FRAMEWORK

In this section, we present a framework based on the values presented in component values section and interconnections section. This framework is a model where we connect the clustered components that are derived from list of components table (table 2). The idea for doing this model is to show how the value of product or service is created and added at each component level.

Starting with the mission component, we deal with the things like (Hamel, 2000) what is our business concept? What are our core competencies? (Afuah & Tucci, 2001) What target markets are aimed to deliver kinds of value proposition? (Tapscott, 1999) What all the capabilities and resources needed? (Dumas & Blodgett, 1999; Richard & Brett, 2004) What all the value chain activities needed in building the value proposition? Finally to decide on what must be the organizational structure? and how all the systems, processes are implemented?

Through business landscape and creative thinking we may encompass all these things. A firm must have creative thinking, a business concept that sets the strategy, aim for the firm (Hooley et al, 2005; Richard & Brett, 2004; Hamel, 2000). When we have cleared with this, we can look for other components that are needed as explained in the above section.

In the value block, the value chain activities contain all the key processes in constructing the product or value, value is added at each level. New value propositions can be obtained through virtual value chains (Walters, 2004; Timmers, 1998; Porter, 1985). It is heavily dependent on the core processes and designs, products or services that are served dynamically in accordance with market dynamics (Chang, 2005; Walters, 2004). Value chain can be stable when all its activities are strongly linked to deliver the value proposition (Nordberg et al, 2003; Bidgoli, 2002). Through customer value, firms gain insights on trust, quality and loyalty factors by which activities are constantly monitored (Khalifa, 2004; Rahman, 2004; Osterwalder & Pigneur, 2002; Afuah & Tucci, 2001; Hamel, 2000; Farquhar & Langmann, 1999). With changing customer perceptions, environmental changes firms tries to deliver new value propositions or modifying its existing products, thereby as value propositions change, new pooling of resources, dynamic capabilities, effective teams, are needed (Carmeli, 2004; Tapscott, 1999; Dumas & Blodgett, 1999; Andreu & Ciborra, 1996; Barney, 1991). Partner networks help in creating new value proposition, marketing a firms value propositions through partner websites, alliances with brand companies to enter into new markets. Partnering firm's success only when they have mutual benefit and a common goal (Jones et al, 2003; Hamel, 2000; Tapscott, 1999).

Firms must effectively market its value proposition to target markets, magnifying the value to customer segments (Osterwalder & Pigneur, 2002). Value Proposition is delivered to target market where value is proposed to target customer. The value offered will depend on the cost element in developing the product. Value proposition in the value block is delivered through various distribution channels. Firms can reach customers at a

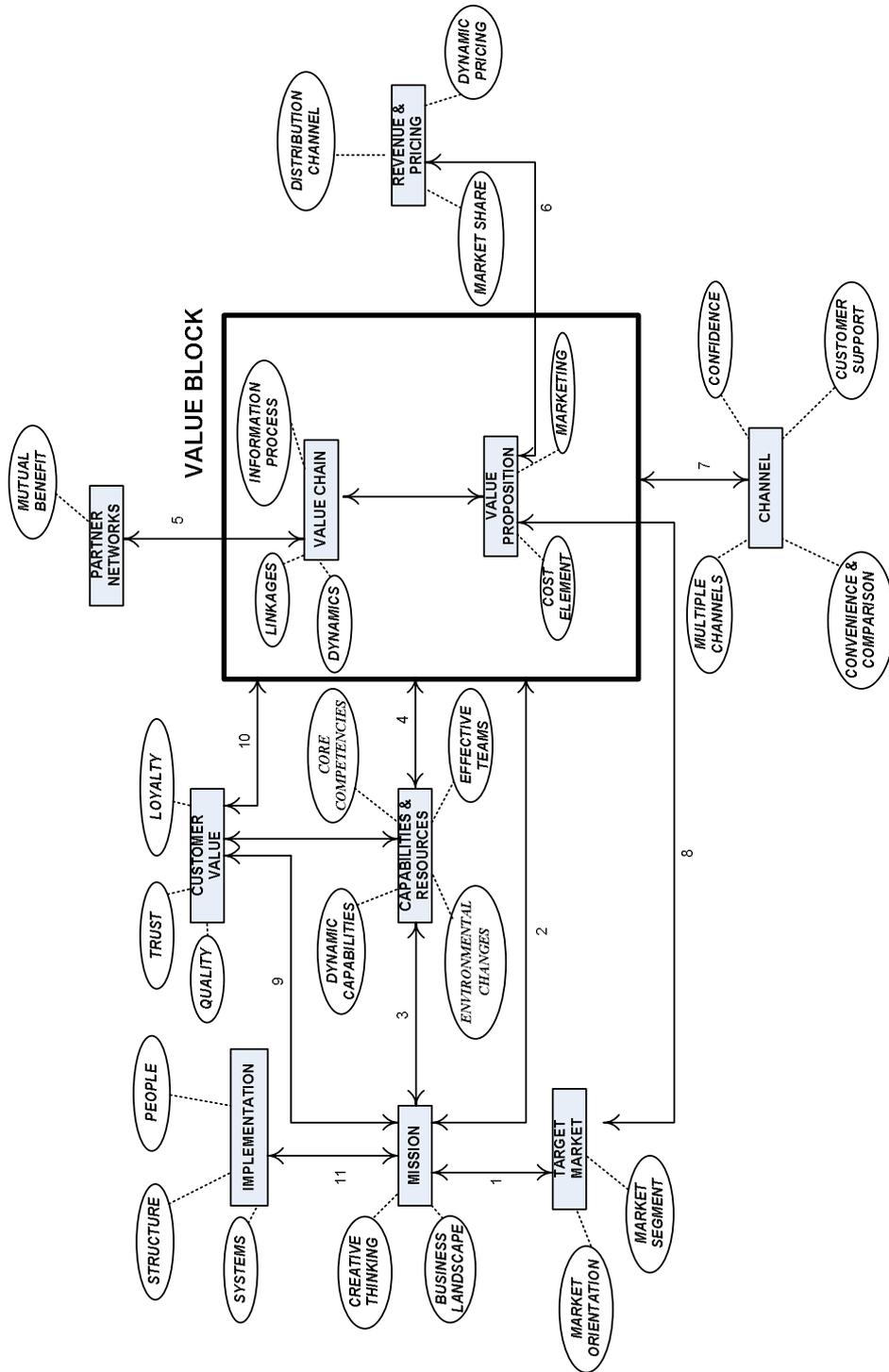
faster speed than any other channel through e-tail. Customer value factors significantly affect e-tails since the “feeling” of the products (in case of physical product is absent), issues of security, intrusion, arise in trust. With new IT in the electronic age, these things can be controlled (Webb, 2002; Bharat, 1999; Falch, 1998). Through customer support and hybrid channels (mix of e-tail and re-tail) firms can overcome “feel” factor (Goffin, 1999).

Revenue and pricing mechanisms with respect to cost element, the distribution channel through which value is proposed to a customer, decides the firm’s profits. New value chains and value propositions will be sources of revenues. Through dynamic pricing mechanism, different sort of pricing mechanisms are sought based on type of firms, its markets share (Afuah & Tucci, 2001; Lancioni, 2005). A good organizational structure must be sought out to have a successful implementation of all these systems. Based on firm’s offering and its mission, organizational structure is selected and ICT have their impact in selecting the organizational structure. Skilled personnel, employees at all levels, actors or roles at higher level in organization structure, all are collectively responsible for firm’s success (Khalifa, 2004; Afuah & Tucci, 2001). Communication is efficiently provided to all levels of firms by ICT.

The framework provided here can be useful in viewing the critical success factors associated with each e-business model component and dependencies between these components. Component interconnections show the ‘fit’, that is how each component is dependent on other component, the order in which each component is defined based on the factors associated with each component. This framework can help firms in viewing their essential components, what information systems to include based on their type of electronic business. It helps firms in viewing, deciding the core components, in knowing key issues that decide profits, issues that relate to maintaining the resource profile using information technologies, things that are to be considered in keeping balance between components. Further it can be used for understanding the information needs and the use of ICT and information systems at each component level.

It is evident from the literature, that there has been diversity in deciding key components of an e-business model. The key components of an e-business model depends on type of e-business, firms core business activities. The framework presented in this work contains the set of key component derived from table 2 (section 4.2.2) which can be common and primary to any kind of e-business model. Through this framework, a firm that is novice to e-business or already established one, can clearly view, decide and compare their e-business model key components and dependencies between them.

Figure2: Framework for e-business Model Component Interconnections and values



8 CONCLUSION

In this dissertation, an overview of currently available and successful e-business model definitions are shown. We pointed out an agreed set of key components based on review from the literature using the list of components table in section 4.2.2 (table 2). Values associated with each of these components and Interconnections between these components are shown using the component values. Finally a framework is presented that includes all these components, component values and interconnections between them.

In conclusion, research in e-business models domain areas are growing at fast pace with use of the Internet technologies, ICT and new IT innovations. Many of the traditional business models have already changed to electronic business model; technological sophistication is seen in all processes and all areas of e-business models. Research in e-business model decomposition to key elements and definitions is much focused currently. From overview of e-business model definitions, it is clear that the definitions vary with respect to researchers approach and area under study within e-business domain. While some defined it from revenue sources and profit generation, others defined it from strategy perspective, architecture that includes all roles, activities and sustaining competition. Further, it is also evident that decomposition of an e-business model into its key elements and identification of key components is varying with respect to various researchers.

Value's associated with each component affect or make up the component and also take part the quality of connections between components. Product value flow is shown through e-business model component framework. Value is added to product at each level of component and the fit between components in adding this value to product depends on the corresponding component values or factors.

9 FUTURE WORK

The major future work of this dissertation will be of refining and extending the framework presented in interconnections section (section 7). At the same time the values associated with the key components and also the identified key components are based on limited sample and are mainly reviewed from various authors who have been involved in interviews, case studies and other forms of empirical research. The component values or factors and the agreed key components set mentioned in this dissertation are not to be considered exactly. Hence the values and key components identified in this dissertation can be tested and further refined and extended. This will also result in upgrading the framework. In the same way, from e-business model overview (section 4.1), our view of what actually an e-business model includes is based on the review from those authors specified in table 1. Further a comprehensive review of all successful works within e-business model can be given by extending the table 1, with other authors who have addressed e-business model in various perspectives and have not been included in this table. Thus finally giving a comprehensive review of e-business models by authors from all corners in association with what all the areas they addressed within their work can be done. This will serve as a filtered work of all the authors who have been engaged within e-business model research.

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**APPENDIX I. CLUSTERED COMPONENTS LIST TABLE
FROM TABLE 2**

1	MISSION	AUTHORS
	Mission or Business Mission	Alt & Zimmerman (2001), Hamel (2000) , Pateli& Giaglis (2004)
	Sustainability	Afuah & Tucci (2001)
	Information	Osterwalder & Pigneur (2002)
	Basis of Differentiation	Hamel (2000)
	Information & Insight	Hamel (2000), Chesbrough & Rosenbloom (2002),
	Competitive Strategy	
	Legal issues	Hedman & Kalling (2003) Alt & Zimmerman (2001)
2	TARGET MARKET	AUTHORS
	Target Customer	Osterwalder & Pigneur (2002)
	Scope or Target Market	Hamel (2000), Pateli& Giaglis (2004)
	Market Model	Petrovic et al (2001)
	Buyers	Hamel (2000)
	Market Segment	Gordjin & Akkermans (2001)
3	VALUE CHAIN	AUTHORS
	Connected activities	Afuah & Tucci (2001)
	Key Activities	Hedman & Kalling (2003), Pateli & Giaglis (2004)
	Value Chain Net	Chesbrough & Rosenbloom (2002), Pateli& Giaglis (2004), Timmers (1998)
	Activity Configuration	
	Value Model	Osterwalder & Pigneur (2004)
	Production Model	Petrovic et al (2001) Petrovic et al (2001)
	Value Activity	Chesbrough & Rosenbloom (2002), Gordjin & Akkermans (2001).
	Processes	Alt & Zimmerman (2001)
4	VALUE PROPOSITION	AUTHORS
	Value Proposition	Linder & Cantrell (2000), Osterwalder & Pigneur (2002), Pateli & Giaglis (2004), Timmers (1998)
	Internet enabled commerce	Linder & Cantrell (2000)

Value Object	Gordjin & Akkermans (2001)
Offering	Hedman & Kalling (2003)
Commerce Process Model	Linder & Cantrell (2000)
5 CAPABILITIES & RESOURCES	AUTHORS
Capabilities	Osterwalder & Pigneur (2002), Afuah & Tucci (2001)
Resources	Hedman & Kalling (2003), Pateli & Giaglis (2001)
Core Processes	Hamel (2000)
Resource Model	Petrovic et al (2001)
Core Competencies	Hamel (2000)
Strategic Assets	Hamel (2000)
Resource & Assets	Osterwalder & Pigneur (2002)
6 CHANNEL	AUTHORS
Channel Model	Linder & Cantrell (2000)
Fulfillment & Support	Hamel (2000)
7 PARTNER NETWORKS	AUTHORS
Partnership Network	Osterwalder & Pigneur (2002)
Suppliers	Hamel (2000), Hedman & Kalling (2003), Timmers (1998)
Partners	Hamel (2000)
Coalition	Hamel (2000)
Value network	Chesbrough & Rosenbloom (2001)
8 REVENUE & PRICING	AUTHORS
Pricing or Pricing Structure	Afuah and Tucci (2001), Hamel (2000)
Price setting	Gordjin & Akkermans (2001)
Casualty of Revenue	Gordjin & Akkermans (2001)
Revenue Source	Afuah and Tucci (2001), Osterwalder & Pigneur (2002),
Capital Model	Timmers (1998)
Revenues	Petrovic et al (2001)
Revenue Model	Alt & Zimmerman (2001)
Pricing model	Linder & Cantrell (2000), Petrovic et al (2001)
Cost & Revenue Model	Linder & Cantrell (2000)
Cost Structure	Pateli & Giaglis (2004), Osterwalder & Pigneur (2002)
Profit Structure	Osterwalder & Pigneur (2002)

9	CUSTOMER VALUE	AUTHORS
	Customer Value	Afuah and Tucci (2001)
	Feel & Serve	Osterwalder & Pigneur (2002)
	Trust & Loyalty	Osterwalder & Pigneur (2002)
	Customer Relationship Model	Petrovic et al (2001)
	Relationship Dynamics	Hamel (2000)
	Customer Ownership	Gordjin & Akkermans (2001)

10	IMPLEMENTATION	AUTHORS
	Implementation	Afuah and Tucci (2001)
	Technology	Alt & Zimmerman (2001)
	Structure	Alt & Zimmerman (2001)
	Organizational Form	Linder & Cantrell (2000)