

# **Strategic Innovation of Business Models by leveraging Demand and Supply Chains in Dynamics Ecosystems**

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# Declaration

I, the undersigned, hereby declare that the work contained in this assignment is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

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## Abstract

The term business model is relatively recent. Though it appeared for the first time in the 1950s it rose to prominence and reached the mainstream only in the 1990s. Today the term is commonly used, but there is still no single dominant definition.

Many different conceptualizations of business models exist. They all have various degrees of resemblance, or difference of some degree. From those business literatures, an intellectual root of the concept has been explored, offering a working definition, and the necessity for a company to renew its business models. To deliver information, products, and services in new ways, new business models address previously unrecognized or unmet needs, and appeal to customers precisely because they improve the quality of what is available to them, or reduce the cost, or both. Leading companies have discovered that to keep up with the rate of change in the marketplace, today's key performance factors are different than they were in the past, hence the need for new business models and their strategic innovation.

This thesis explores the role of business models in leveraging demand and supply chain dynamics in business ecosystems. Radical changes in the business environment have suggested limitations of traditional business models. New business environments are characterized not only by the rapid pace of change, but also the discontinuous nature of such change. New business environments, characterized by dynamically discontinuous change, requires a re-conceptualization of new competencies, new business models that break the rules of the game in the industry. The fact that a company should constantly attempt to develop new business models in its industry if it hopes to survive, has been examined, and how those new business models can leverage demand and supply chain dynamics in business ecosystems. The theoretical findings are illustrated by relevant case studies.

## Opsomming

Die term “besigheidsmodel” is van redelik onlangse oorsprong. Alhoewel dit vir die eerste keer in die 1950s verskyn het, het dit eers in die 1990s op die voorgrond getree en is dit in die hoofstroom opgeneem. Vandag word die term vry algemeen gebruik, maar daar is nog steeds geen enkele oorheersende definisie daarvoor nie. Daar bestaan heel party verskillende beskouings van besigheidsmodelle, soos gesien tydens ‘n uitgebreide literatuuroorsig. Al hierdie beskouings stem ooreen met of verskil van mekaar in mindere of meerdere mate.

Vanuit hierdie besigheidsliteratuur is die intellektuele onderbou van die konsep ondersoek, ‘n werksdefinisie is opgestel, en die belang vir maatskappye om hul besigheidsmodelle te hernieu is vasgestel. Nuwe maniere om inligting, produkte en dienste aan te bied vervul in voorheen ongeïdentifiseerde en onvervulde behoeftes, en is aantreklik vir verbruikers juis omdat dit die kwaliteit van dit wat beskikbaar is verbeter, of die prys daarvan verlaag, of albei. Toonaangewende maatskappye het uitgevind dat die prestasiefaktore wat vandag noodsaaklik is om by te hou met die pas van verandering in die mark, verskil van dié wat in die verlede belangrik was.

Hierdie tesis ondersoek die rol wat besigheidsmodelle speel om die dinamika van aanbod en aanvraag te beïnvloed. Radikale veranderinge in die besigheidsomgewing dui aan dat tradisionele besigheidsmodelle aan sekere beperkinge onderhewig is. Nuwe besigheidsomgewings word gekenmerk deur nie net die snelle pas van verandering nie, maar ook die diskontinue aard van die verandering. Die nuwe besigheidsomgewing, herkenbaar aan hierdie dinamiese diskontinue verandering, benodig ‘n herkonseptualisering van nuwe bevoegdhede en nuwe besigheidsmodelle wat al die reëls van die spel binne die industrie breek. Die navorsing ondersoek die belangrykheid van ‘n maatskappy se konstante soeke na nuwe besigheidsmodelle binne die industrie, indien die maatskappy hoop om te oorleef. Dit kyk ook na maniere waarop sulke nuwe besigheidsmodelle die aanvraag en aanbod dinamika binne besigheids-ekosisteme kan beïnvloed. Die teoretiese resultate word geïllustreer met relevante gevallestudies.

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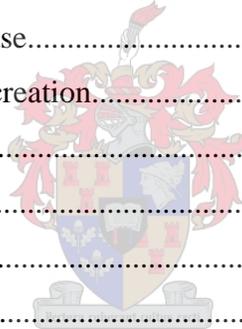
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# CHAPTER 1

## INTRODUCTION

### 1.1 Background of the study.

Fundamental strategic innovation is a vital, yet often unattainable ideal for most firms. While market driven, incremental innovation manifests itself in new products or services, changes in positioning and other marketing tactics, market driven, fundamental strategic innovation is achieved by the creation of new competencies and new business models that break the rules of their industry (Hamel and Prahalad, 1994; Markides, 1997).

In the beginning of the 21<sup>st</sup> century, businesses are challenged by a fast-changing and uncertain environment. The degree of change and its impact on an organization are often viewed as punctuated periods of equilibrium (Beinhocker, 1999; Leibold, 2002). This means that change occurs in unpredictable sequences of small, medium and large alterations on an ongoing basis. In other words, change is seen as the only constant today, but is unpredictable in its form. The catalysts of change are thereby seen as both inside and outside the organization, i.e. in its immediate environment and in the larger external world.

In the business world, non-linear systemic patterns have been recognized for the last two decades. Major drives have been identified as globalization or communication and computer technologies. The present era has been described as fast-changing, network-innovative and knowledge-driven (Leibold et. al., 2002).

Today knowledge and mobile environment trigger the challenge for companies to change their business models (which include their products, markets, distribution channels, organizational structures, cultures- simply stated, the way they do their business), and also as explained by Tucker (2001), no matter how strong and seemingly durable a firm's current business model is, it will be imitated, diluted and commoditized. But most importantly, it will be challenged by new business models.

One of the major contributing insights into the theory of change comes from the merging sciences of chaos and complex adaptive systems (Beinhocker, 1997). The central construct of chaos theory states that almost undetectable small changes in initial conditions may lead to large amplifications of the effect of the change (Rosenhead, 1998). The oft-quoted imagery regarding this is the assertion that the flapping of a butterfly's wing can in due course decisively affect weather on a global scale.

It seems that the rate of change has been a critical parameter in determining the validity and significance of strategic management models. The slow change of the industrial era of much of the 19<sup>th</sup> and 20<sup>th</sup> centuries allowed traditional strategic management models to work well, enabling firms to be in control of their own future. However, many writers (Youngblood, 1997; Pascal, 1999; Clarke and Clegg, 2000) argue that the highly uncertain and unpredictable pattern of the late 20<sup>th</sup> century and today's turbulent environment makes traditional analytical models inappropriate for use on their own.

According to Michael Porter's industrial analytical model (also known as the "five forces" model) (1985), as long as the five forces of industry dynamics remain under control, a firm can achieve competitive advantage by following certain strategic choices, for instance building strong brand identity, raising entry barriers, raising switching costs, and having proprietary products protected by patents. But when the impact of change drivers on one or more of the five forces becomes large enough to be significant, it fundamentally alters the existing industry structure, consequently requiring new business processes and models (Grove, 1996).

The concept of "business models" is not as clear and specific as one would imagine in view of the many publications which recognize their relevance to organizations' existence. Recent publications in books and journals illustrate concern over firms' difficulty in achieving sustainable competitive advantage in the competitive landscape. Furthermore, there is a growing interest in how firms can use non-linear innovation and "first mover" strategies, i.e. being first to market a product or service, in order to survive

and be competitive in a fast changing environment. However, authors often do not give adequate definition to the term “business models.” Therefore, a consistent definition and framework is lacking and there is ambiguity and confusion sometimes in the use of the concept.

Approaches to strategies, such as “resource based view”, knowledge management, leveraging dynamics capabilities, and strategic networks continue to govern business thinking. But with disruptive technologies and the increased rate of change in the competitive landscape, experimenting with novel and unconventional ideas to produce “revolutionary innovations” has brought about the development of new business models. With discontinuous changes taking place in every industry, businesses are facing not only shorter product life cycles but also shorter strategy life cycles (Hamel, 1998). Therefore, an organization should constantly attempt to discover new business models if it hopes to survive and grow.

Working “differently” seems to be an intuitively suitable approach for survival or even prosperity in the present era’s increasingly competitive business landscape. Companies need to change industry rules (the accepted way of doing business in the industry) by fundamentally questioning their tendency to conform to useful but “unoriginal” (copied, imitated, improved) practices, lessons, and experiences.

In a turbulent world, the rules change constantly and new games keep popping up - today's winning strategy has a nasty way of becoming tomorrow's liability - nearly overnight (Hamel, 1998).

In the past few years, significant interests have been focused on the conditions and prerequisites crucial for strategic innovation of business models. However, it is evident that there is lack of consensus about the fact that how this can be done in leveraging demand and supply chain dynamics in business ecosystems. On the way of strategic innovation of business models, the contributions of certain authors have been interesting. Among those Govindarajan and Gupta (2001), Hamel (1998), Amit and Zott (2001), and Youngblood (1997). The value, or the contribution, or the importance of such generic

approaches is observed in the increased interest given to new value creation and non-linear innovation to be competitive- and even survive- in a fast changing environment.

The following case study is excerpted from Bartlett, and Ghoshal, (2000), and it is relevant to review it here in order to illustrate how important it is to introduce new business models that challenge an industry's established rules of competition, or ways of doing business.

### **1.1.1 Case study: Developing and Implementing a New Business Model in the Global Wine Industry- the BRL Hardy Experience.**

BRL Hardy is an Australian wine company that has made inroads into the global wine market in the past decade. From a 1991 base of US\$31 million in export sales- much of it bulk for private labels and the rest an assortment of bottled products sold through distributors – Hardy has built its foreign sales to US\$178 million in 1998. Almost all of it directly marketed as branded products. Managing director Steve Millar describes the insight that triggered this turnaround: “We began to realize that for a lot of historical reasons, the wine business- unlike the soft-drinks or packaged-foods industries – had very few true multinational companies and therefore very few true global brands. Wine consumers were getting more discerning and knowledgeable in the early 1990s, and, to our reasoning, a great opportunity existed for a company to build a well-known international wine brand of quality and reliability”.

#### **Industry Production Fragmentation and Strategic Gap Identification**

BRL Hardy noticed the inflexibility of the European practice of labeling wines by region, subregion, and even village – the French appellation or the Italian dominazione systems are classic examples. A vineyard could be further categorized according to its historical quality classification such as the French premier grand cru, the grand cru, and so on. The resulting complexity not only confuses consumers, but also fragments producers whose

small scale prevents them from building brand strength or distribution capability. This created an opportunity for major retailers, such as Sainsbury and Tesco in the United Kingdom, to overcome consumers' confusion – and capture more value themselves – by buying in bulk and selling under their stores' own label.

The most striking aspect about wine shelves of the average supermarket in developing countries is the sheer range and profusion of wines on offer. A large supermarket store sells hundreds of different wines made by a huge variety of producers. This proliferation reflects the highly fragmented nature of the world's wine production industry.

Even the world's largest wine company in terms of volume (although not revenue) California's E&J Gallo, represents just over 1% of world production. The fragmentation is most evident in the "old world" wine industries of Western Europe. Bordeaux in France, for example has over 12,000 producers: Italy has over a million separate wine growing units in private ownership: Germany and Austria have similar characteristics of small, family-owned wine production units. In the "new world" wine industries, such as in Australia, the USA, South Africa, Chile and Argentina, the situation is markedly different. In Australia, just four companies dominate 80% of the local wine industry, of which BRL Hardy is one. In world terms, however, Australia produces only 2% of the world's total wine production.



### **Industry Demand Situation and Customer Value Propositions**

Since 1982 the global demand for wine, in overall volume terms, has declined by 25%, causing some observers to remark that the world has a "wine lake" of enormous proportions. This "wine lake" is only evident in the lower quality, lower-priced wine categories, as the demand for quality wines, noble varietal wines, new style red wines, and wines from "new world" producers has not been affected by the overall decline in demand. In the 1980s and early 1990s, BRL Hardy's international business was caught in the "trap" of providing bulk wines of lower quality. It distributed its Hardy label wines to international retailers through local agents, and sold bulk wine for private labels directly.

Millar's insights gave the company a way out, if it was willing to change the "rules of the game" on both the demand and supply sides. First, new staff was appointed and new

resources allocated to upgrade the overseas sales offices. Instead of simply supporting the sales activities of distributing agents, they look direct control of the full sales, distribution, and marketing. Their primary objective was to establish Hardy as a viable global brand, with more direct linkages to customers. A key issue was the realization that the major knowledgeable wine customer need, or customer value proposition, was made up of three elements: well-known global brands; consistency of quality and availability; and value for money, including affordability and competitive pricing.

### **Reconfiguring the Hardy Value System and Value Chain**

The company's supply-side decisions were even more significant than those on the demand side. In order to exploit the growing marketing expertise of its overseas units, Hardy encouraged them to supplement their Australian product line by sourcing wine from around the world. Not only did Hardy offset the vintage uncertainties and currency risks of sourcing from a single country, it also gained clout in its dealings with retailers. By breaking the tradition of selling only its own wine, Hardy was able to build the scale necessary for creating strong brands and negotiating with retail stores. The company's new strategy and capabilities are visible in its recent introduction of a branded wine from Sicily called D'istinto. Under a supply agreement and marketing program initiated by BRL Hardy Europe, this product has in its first year sold 200,000 cases in the United Kingdom alone – an exceptional performance. By 2003, when the brand has been introduced to the rest of Europe, North America and Australia, Hardy expects sales to top a million cases.

The advantages of the gap identification to Hardy have been clear and powerful: The Company's range of wines – from Australia as well as France, Italy, and Chile – responds to supermarket companies' need to deal with only a few broad line suppliers. Simultaneously, the scale of operation has supported the brand development so vital to transforming products from the commodity range. Results have been outstanding. In Europe, the volume of Hardy's brand has increased 12-fold in seven years, making it the leading Australia wine brand in the huge UK market, and number two overall to Gallo in the United Kingdom. Branded products from other countries have grown to represent about a quarter of Hardy's European volume. Hardy has evolved from an Australian wine

exporter to a truly global wine company, utilizing global scope and scale economies and drawing on knowledge and skills from many parts of the world.

### **Internal Consolidation and Cultural Change**

In 1991, Christopher Carson, an experienced international wine marketer, was appointed managing director of the company's UK operation. Over the next 18 months, he pruned three-quarters of the items in the fragmented product line, replaced half his management team, and began building a culture around creativity and disciplined execution. Within three years, Sales of Hardy brands not only quadrupled, but one of its imported wines from Chile was also transformed into the best selling Chilean brand in the United Kingdom. Hardy's revenues and profits have amply rewarded its investment, and the organization has developed a worldwide pool of knowledge and expertise that benefits the entire company. Carson, for example, has become the company's acknowledged expert in structuring and sourcing partnerships, and marketing outsourced wine brands.

### **Cautions and Lessons**

In theory, companies can sidestep the disadvantages of alliancing by buying the necessary capabilities, thereby owning them. But this can create problems of its own. Initially, when Hardy made its commitment to international expansion, the company's management had snapped up two established London wine merchants, a large French winery and estate, and a historic Italian vineyard. Hardy believed the acquisitions would provide an asset base and knowledge pool with which to broaden its product sources and increase its marketing clout. But the challenge of simultaneously developing expertise in Italian and French wine-making as well as English marketing proved overwhelming and soon placed huge financial and management strains on the company.

After this false start, Hardy realized that in international business new capabilities can not simply be installed; they have to be developed and embedded through purposeful internalizing. This is the reason why, despite acute financial pressures, the company rejected a tempting opportunity to rapidly expand its UK market volume by supplying wine for a leading supermarket chain's private label. Instead, it opted for the more difficult and time-consuming task of building Hardy's own brand image and the

marketing and distribution capabilities to support it. This task has required considerable investment in new personnel and training, as well as a major reorientation of the internal culture.

A radical corporate strategy, as in the case of BRL Hardy, is to introduce new business models that challenge an industry's established rules of competition, or "ways of doing business". Though risky, this approach can be very effective in industries in which tradition is deeply embedded or which are comfortably divided among an established oligopoly. Potential risks can be minimized by innovatively optimizing an industry value system and organizational value chains through integrated processes, with a strong focus on the key customer value proposition(s).

Source: Adapted from Bartlett, C.A. and Ghoshal, S. (2000),139-140.

Change can occur anywhere, anytime in different ways. The complex interconnectedness of system (corporations, competitors, suppliers, customers, institutions, societies) serves as a network of super highways that spread change to break out quickly, and to affect all at once. The result is discontinuity of existing ways of doing business as well as change in industry structure and shifts in market forces. As the BRL Hardy experience illustrates. When this happens a radical corporate strategic occurs, i.e. the point where industry dynamics fundamentally change (Grove, 1996).

However, many industry incumbents do not realize when it signals. (Prahalad and Oosterveld, 1999) state that leaders often misinterpret the effects of strategic business models, attributing the change to loss of market share, unattractive products and profit declines; their first reaction to discontinuities therefore is to "work harder" when what they really need is to "work differently". Burgelman and Grove (1995) call this strategic dissonance, referring to conflicting voices that emerge within the organization when a firm's competencies suddenly diverge from the basis of competition or when its stated strategy differs dramatically from what it actually does.

## 1.2 Statement of the Problem.

A major shift in business management from a purely competitive focus via the recognition of competition and collaboration towards a mindset of co-evolution within socio-cultural systems is taking place (Leibold, 2001). In this realm, the new knowledge-networked economy requires a totally different strategic management mindset and toolbox.

The reasons for companies' failures today's environment should not be attributed to the characteristics of the external world only, i.e. fast non-linear changes and uncertainty. The failures are seen as the result of the inability of companies to continuously change their ways of doing business (Hamel, 2001), or to continuously deploy and redeploy resources into new value-creating systems and competencies (see e.g. Normann, 2001; Prahalad and Hamel, 1990). This inability also seems to be caused by the fact that executives, reporters and analysts who use the term don't have a clear idea of what it means. They use it to describe everything from how a company earns revenue to how it structures its organization (Linder, 2001)

The strategic innovation of business model is not a description of a complex social system itself with all its actors, relations and processes. Instead it describes the logic of a "business system" for creating value that lies behind the actual processes.

It is the conceptual and architectural implementation of a business strategy and represents the foundation for the implementation of business processes (Linder, 2001)

A business model is the value a company offers to one or several segments of customers and the architecture of the firm and its network of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue streams. It is the way of doing business so that a company can profitably sustain itself (Rappa, 2000).

For companies to be competitive in a rapidly changing environment, many authors have proposed various approaches for strategic innovation of business models. Even if some

similarities seem to be observed, there seems to be lack of generic managerial approaches for the development of a strategic innovation of business models.

### **1.3 Objective of the study**

The objective of the study is to investigate the relevance and different approaches in strategic innovation of business models, and especially how innovative business models can be developed by leveraging demand and supply chains in business ecosystems.

### **1.4 Method of the study**

The study methodology is a combination of different secondary information coming from books, articles, internet sources, and research papers. During this study an extensive desk research investigation has therefore been conducted on extant strategic management literature, including knowledge creating tools, strategic adaptation, industry evolution, strategic reinvention, organizational innovation and change. Information has been collated and evaluated to establish a working definition of strategic innovation of business models and the fact that demand and supply chain dynamics in business ecosystems must be leverage, have been investigated. Although the current rapid rate of transformation is affecting almost all industries, the widespread impact of the internet is more radically transforming the computer, telecommunication, finance, banking, insurance, office equipment, printing, and entertainment industries. From these industries, this thesis attempts to draw a number of case studies so as to provide empirical evidence for some theoretical arguments.

## 1.5 Structure of the study

The study is structured and presented in six chapters. Chapter one consists of this introduction follow by the background of the study, case study, statement of the problem, objective of the study and method of the study. Subsequently, the outline of the study structure has been delineated in logical sequence.

Chapter 2 consists of a review of extant strategic innovation of business models, demand and supply chain dynamics, business ecosystems, and the contexts and dimensions involved in these ones. The definitions have been used for analytical purposes and to provide insight into the basic nature of strategic innovation of business models, demand and supply chain dynamics, and business ecosystems.

Chapter 3 illustrates the different approaches and techniques used for strategic innovation of business models, and the problem faced by leveraging demand and supply chain dynamics in business ecosystems.

Chapter 4 describes the dynamics - turbulence and uncertainty - in the business environment of the “new economy” due to changes in technology and globalization, and the relevance of these for organizations to use strategic innovation of business models.

Chapter 5 analyses methods based on recent research that could be employed in developing, leveraging demand and supply chain dynamics in business ecosystems.

Chapter 6 presents the summary, conclusions and recommendations of the study.

## CHAPTER 2

### A REVIEW OF EXTANT THEORY AND PRACTICE OF STRATEGIC INNOVATION OF BUSINESS MODELS

#### 2.1 Introduction

The content of this chapter is a critical analysis of the nature of the concept of strategic innovation of business models. For this purpose, it is fundamental to provide an overview of the theory of strategic innovation of business models. Therefore, definitions, components, and existing approaches to business models are reviewed. The aim is to elaborate the current level of sophistication of business models approaches and to adopt a working definition and anatomy.

##### 2.1.1 Innovation

The definition of innovation includes technological development, market introduction and iterative nature of the process. However, the notion of innovation is not unambiguous. Also terms used to describe the innovation types also vary a lot. (Garcia; Calantone and Roger, 2002), have examined innovation literature and created a typology to define the types of innovations. According to them there are two important aspects in innovation. Firstly innovation process includes both technological development and market introduction aspects. Secondly the process is iterative, and therefore it includes an introduction of new innovation and reintroduction of improved innovation. The iterative nature of innovation process leads to different types of innovations. (Garcia et al., 2002) Typically these types are called radical innovation and incremental innovation. (Garcia et al., 2002; Hamel, 2000)

(Henry Chesbrough, 2003) argues that there is a paradigm shift happening in innovation management. The old closed innovation paradigm is shifting to a new open innovation paradigm. In the closed innovation paradigm the innovations come from inside the

organization, and they are carried out in existing markets with existing business model. The open innovation paradigm grounds to the idea that innovations form when information is shared between organizations. In open innovation the internal and external ideas are combined into new innovations to reach new markets and they are implemented with completely new business models. (Chesbrough, 2003) Business concept is a construct to describe the innovations. Gary Hamel has developed a useful framework to analyze the business concept (Hamel, 2000).

“Innovation typically comes from looking at the world through a slightly different lens” (Hamel, 2002). Gary Hamel (2000) has linked the Innovation to the value creation of the firm. He uses the term business concept innovation. Revenue can’t be grown significantly without new products and services to customers. Radical innovation needs to meet at least one of three standards. It has to change customer expectations, and it has to change the basis for competition. It also has to change industry rules (Hamel, 2002). (Mitchell and Coles, 2003) have argued that business model innovation is the management practice that is most clearly associated with high growth. By business model innovation the authors mean “any successful change in any elements that enhances an on-going performance in delivering benefits” (Mitchell and Coles, 2003). (Michael E. Porter, 1985) claims about tradeoffs that they are essential to strategy, because they create the need for choice and purposefully limit what a company offers (Porter, 1985 p. 69)

### **2.1.2 Innovation paradigm**

The key argument in closed innovation is, according to Chesbrough (2003), that “successful innovation requires control”. The innovations come from inside the firm and this requires major investments in research and development (Chesbrough, 2003). Also the quality and number of the innovations can be limited because of this internal point of view. Following the closed innovation paradigm leads easily to a situation where the firm produces only incremental innovations and implements them via the existing business model (Chesbrough, 2003).

The competition between firms takes place between the business models of firms (Hamel, 2000) and incremental innovations do not usually form new markets like radical innovations (Garcia et al., 2002). Therefore there is a strong possibility that some other firms will come up with some radical innovation and entirely new business model (business models will be analyze later), which will replace the existing business model in market. To avoid this, a firm has to improve its existing strategy by continuously monitoring and challenging it by innovative new business concepts. (Laaksonen et al., 2004)

The main idea in open innovation paradigm is that the value is created not only inside a single firm but also between several firms. As well the innovation can end to the market from inside or outside the firm (Chesbrough, 2003).

### **2.1.3. Real option point of view to strategy formulation**

Technology in itself does not create profits to companies; it is the technology that consumers adopt which matters. It is impossible to predict which innovations make the breakthrough, but to manage the adoption and to make the innovation successful, a business model is definitely an important tool. (Brown, 2003) To succeed in fast changing technology environment firm has to be ready to make correct choices between alternative resource allocation decisions, which contain uncertainty. These decisions have to be made still maintaining maximum flexibility. (Copeland and Keenan, 1998)

Chesbrough points out that the more effective existing business model has been, the more the firm is tied into it (Chesbrough, 2003). This creates a risk to a firm, if it does not recognize the opportunity to renew its strategy (Hamel and Välikangas, 2003). In strategy formulation it is important to generate flexibility for the company by creating competing business concepts from which the firm can choose, especially in times of uncertainty. The new business concepts can be understood as strategic options for a firm. Innovation represents the recognition of the shadow options from the unlimited pool of undetected opportunities. Technology enables the shadow options to become real. (Laaksonen et al., 2004)

New business concepts (or options) include uncertainty (Hamel, 2000), which in business environment is regularly understood as risk. (Copeland and Keenan, 1998; Kyläheiko et al., 2002; McGrath, 1997; Trigeorgis, 1993) However, options contain also opportunity (Amram and Kulatilaka, 1999; Copeland and Keenan, 1998; McGrath, 1997; Trigeorgis, 1997).

#### **2.1.4. Innovation types**

Innovativeness is a measure to describe the “newness” of the innovation i.e. how new the innovation is. This depends on the point of view. Some innovations are new to the world some to the firm. (Garcia, Calantone and Roger, 2002), use macro and micro perspective to define the newness of innovation. Macro perspective of the newness is that an innovation has the capacity to create a paradigm shift in the science and technology and/or in the market structure. Micro perspective of the innovativeness on the other hand is the capability of innovation to influence the firm’s marketing and technological resources, skills, knowledge, capabilities or strategy. (Garcia et al., 2002)

According to Hamel there are two kinds of innovations: incremental and radical, as stated before. Incremental innovations are products that provide new features, benefits or improvements to the existing technology in the existing market. These innovations do not cause macro level discontinuations. Radical innovations are innovations that lead to new technology resulting in a new market infrastructure. Radical innovations do not answer existing needs; they create demand. (Garcia et al., 2002) Hamel has divided the micro perspective of the innovations to business level and product/process. Industry level represents the macro perspective (Hamel, 2000).

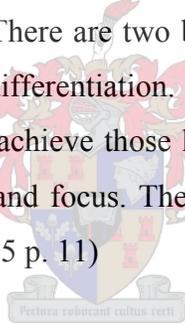
#### **2.1.5. Strategy**

(Fjeldstad and Haanæs, 2001) write about strategy in knowledge and network economy. They state that the fundamental aim of strategy should be going beyond the immediate activity incompatibility tradeoffs. The authors emphasize the “time tradeoffs” over the activity tradeoffs. By “time tradeoffs” they mean the balance between exploiting existing

solutions and exploring ways of going beyond them. Activity tradeoffs involve choices between differentiation and cost (Fjeldstad and Haanæs, 2001). (Henry Mintzberg, 1996) offers five definitions of strategy called the five P's of strategy. Strategy is a plan or it can be a ploy. Strategy is also a pattern, a position, and a perspective (Mintzberg and Quinn, 1996).

In the business literature, there is a distinction between corporate strategy and business level strategy. Corporate strategy deals with issues concerning market and industry decisions of the firm. Business level strategy, sometimes called competitive strategy, focuses on how firm competes in its product market segments. (Grant, 1998 p. 19) Business models have a strong linkage not only to business level strategy but also to corporate strategy.

Michael E. Porter has suggested that the basis for succeeding in the long run is sustainable competitive advantage. There are two basic types of competitive advantages that firm can possess: low costs or differentiation. These basic types combined with the scope of activities that firm uses to achieve those leads to three generic strategies. They are cost leadership, differentiation, and focus. The focus strategy consists of cost focus and differentiation focus (Porter, 1985 p. 11)



## **2.2. Business models**

Business models are perhaps the most discussed and least understood of terms, although as indicated by Schmid et al. (2001) and Ethiraj et al. (2000), at first glance, there seems to be a broad understanding regarding business models. The term is widely used in both academic and practice. Its importance is usually regarded as high since a sound business model seems to influence the revenues, or potential revenues, and the future success of a business initiative. Much debate also revolves around how traditional business models are being changed and around the future of e-based business models.

For (Linder and Cantrell, 2000), where are the tools that help managers easily explain what their business is and how exactly they should execute it, except maybe for simple

text editors or simple charting tools? Where are the really useful tools that allow them to assess, understand, measure, change, communicate or even simulate their business models? Of course every manager and entrepreneur does have an intuitive understanding of how his business works and how value is created. In other words he does have an intuitive understanding of the company's business model, but even though this business model influences all important decisions, in many cases she or he is rarely able to communicate it in a clear and simple way. And how can one decide on a particular business issue or change it, if it is not clearly understood by the parties involved? Therefore it would be interesting to think of a set of tools that would allow business people to understand what their business model is and of what essential elements it is composed of, tools that would let them easily communicate this model to others and that would let them change and play around with it in order to learn about business opportunities.

### **2.2.1 The definition of a business model,**

As the term business model intuitively suggests it has something to do with business and it has something to do with models. A quick lookup in the online version of the Cambridge Learner's Dictionary (Cambridge 2003) returns no result for the full combined term but the following definitions for the two separate terms:

- business: the activity of buying and selling goods and services, or a particular company that does this, or work you do to earn money.
- Model: a representation of something, either as a physical object which is usually smaller than the real object, or as a simple description of the object which might be used in calculation.

Related to the first definition it can be said that the term business in the expression business model relates to "the activity of buying and selling goods and services" and "earning money". Related to the second definition it can be said that the term model relates to "a representation of something as a simple description of the object which might be used in calculations". By combining the two we get a first simple understanding

which is that a business model is a representation of how a company buys and sells goods and services and earns money. In general the purpose of creating a model is to help understand, describe, or predict how things work in the real world by exploring a simplified representation of a particular entity or phenomenon. Thus, in the case of a business model the model (i.e. representation) shall help understand, describe and predict the "activity of buying and selling goods and services" and "earning money" of a particular company.

In the most basic sense, a business model is the method of doing business by which a company can sustain itself – that is, generate revenue. The business model depicts how a company thrives by specifying where it is positioning in the value chain (Rappa, 2002).

Timmers (1998, p.4) provides a definition of a business model as:

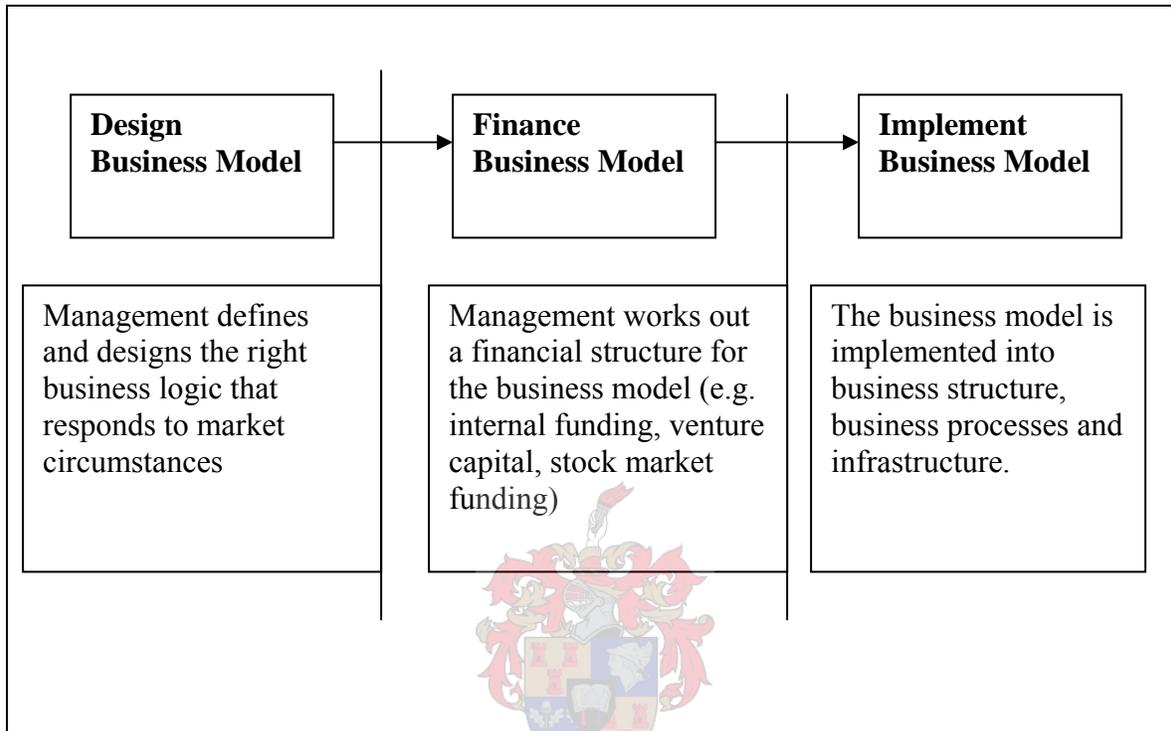
- an architecture for the product, service and information flows , including a description of the various business actors and their roles;
- a description of the potential benefits for the various business actors; and,
- a description of the sources of revenues.

The conceptual business model approach outlined in this dissertation is very abstract and quite different from so-called "business modelling", which is process related and with which it is often confused. This confusion comes from research and industry where the term business model is sometimes used for business process models (Gordijn, Akkermans et al. 2000). However, in the domain of process models a multitude of tools and concepts already exist, such as UML activity diagrams or Petri nets. In contrast, little concepts and tools exist that help companies and their managers specify their more conceptual business model (i.e. their business logic) on a higher level of abstraction.

Furthermore, there is a business model process going from design to implementation illustrated in Figure 1. The business model design translates a strategy into a business model blueprint. Then the business model has to be financed through internal or external

funding (e.g. venture capital, cash flow, etc.). And finally it has to be implemented into an actual business enterprise.

Figure 1: Business model steps



Source: Schmid et al. (2001). Business models steps. *Electronic Markets*, 11(1).

A last common but important confusion related to the concept of business models is that many people speak about business models when they really only mean parts of a business model (Linder and Cantrell 2000). An online auction, for example, is not a business model, but a pricing mechanism, and, as such, part of a business model (admittedly sometimes a dominant part of the business model).

Similarly, an online community is not a business model in itself, but part of the customer relationship. Or take revenue sharing. This is not a business model in itself either, but a way of exploiting partnerships to address the customer and distribute the resulting revenues. A business model has to be understood as a much more holistic concept that embraces all such elements as pricing mechanisms, customer relationships, partnering and revenue sharing.

In a nutshell, a business model is described as:

- an abstract conceptual model that represents the business and money earning logic of a company,
- a business layer (acting as a sort of glue) between business strategy and process. But the business model,
- not a guarantee for success as it has to be implemented and managed,
- something else than the company's business process model (Gordijn, Akkermans et al. 2000)

After having defined what a business model is in this dissertation and what it isn't, it is of course of interest to define what belongs into a business model. This can be equated with the quest of defining a generic business model with all its elements and relationships. Obviously, and as this domain of research is still quite young, there are differing opinions among business practitioners and academicians on what these elements and relationships are. For the moment, until providing more details, we are going to use the following working definition for business models:

A business model is a conceptual tool that contains a set of elements and their relationships and allows expressing a company's logic of earning money. It is a description of the value a company offers to one or several segments of customers and the architecture of the firm and its network of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue streams (Linder and Cantrell, 2000)

A final issue that must be considered when talking about business models is their type. Similar to Linder and Cantrell (2000) three different types exist. First, there is the abstract business model concept, which is a generic model of elements, components and relationships. Second there are the operating business models that are the implemented and existing business models of different companies. In other words, they represent an instance of the generic business model. Finally, there are the scenario business models

that are only virtual, not existing as such in the real world. They can serve different ends like fostering innovation, simulating opportunities or acting as a guideline in change management. They represent a virtual instance of the generic business model.

### **2.2.2 The business model's place in the company.**

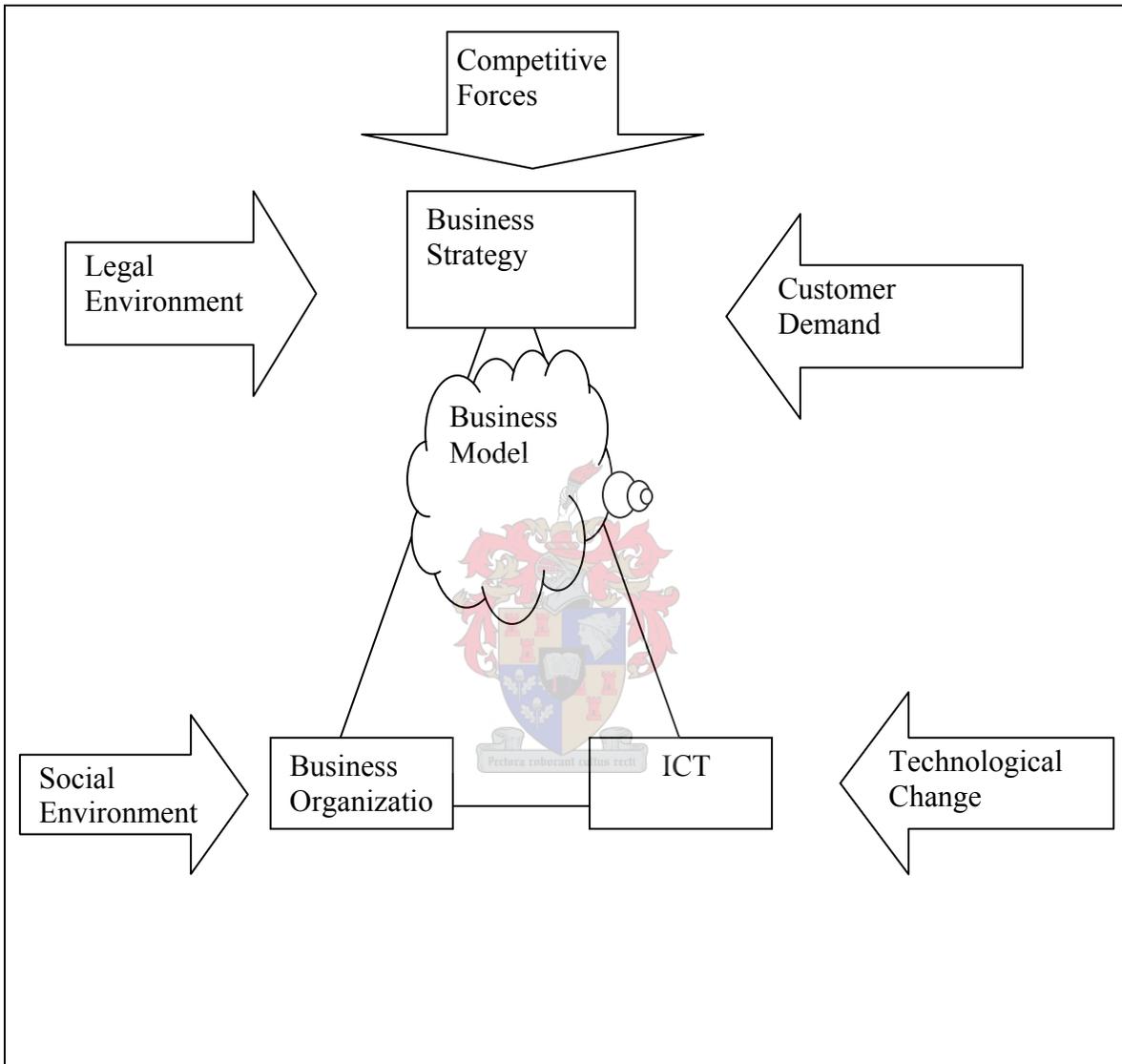
In order to get a better understanding of the business model and its role, it is important to explain how it is situated in the company. As mentioned in the previous section the business model is a conceptualization of the money earning logic of a firm (Linder and Cantrell, 2000). As such it can function as a conceptual link, forming a triangle between strategies; business organization and ICT (see Figure 2). Because there is often quite a substantial understanding gap between these three “worlds”, the business model concept could serve as a federator or glue.

As illustrated in figure 2, business strategy, business organization and ICT look at the firm from different angles and on different business layers. These categories also often regroup different groups of employees with different preoccupations and worldviews. Business people position the company in the market, define the direction and formulate objectives and goals, whereas business process and ICT designers have to understand and implement these visions into something more concrete. In order to guarantee a smooth implementation of business visions and alignment between the different groups, firms require a very clear communication of concepts and understandings between the implicated parties. This is where conceptually defined business models come into play. By using an ontological approach to business modeling, one can create a shared and common understanding of what a company does to earn money and facilitate communication between people and heterogeneous and widely spread application systems (Fensel, 2001).

The triangle and the business model are subject to continuous external forces (Figure 2). Among others these forces include competition, legal, social or technological change and

changes in customer demand. It is the manager's role to design or adapt a company's business model by responding to these external forces.

Figure 2: Environment, Business Models, Strategy, Process and Information Systems



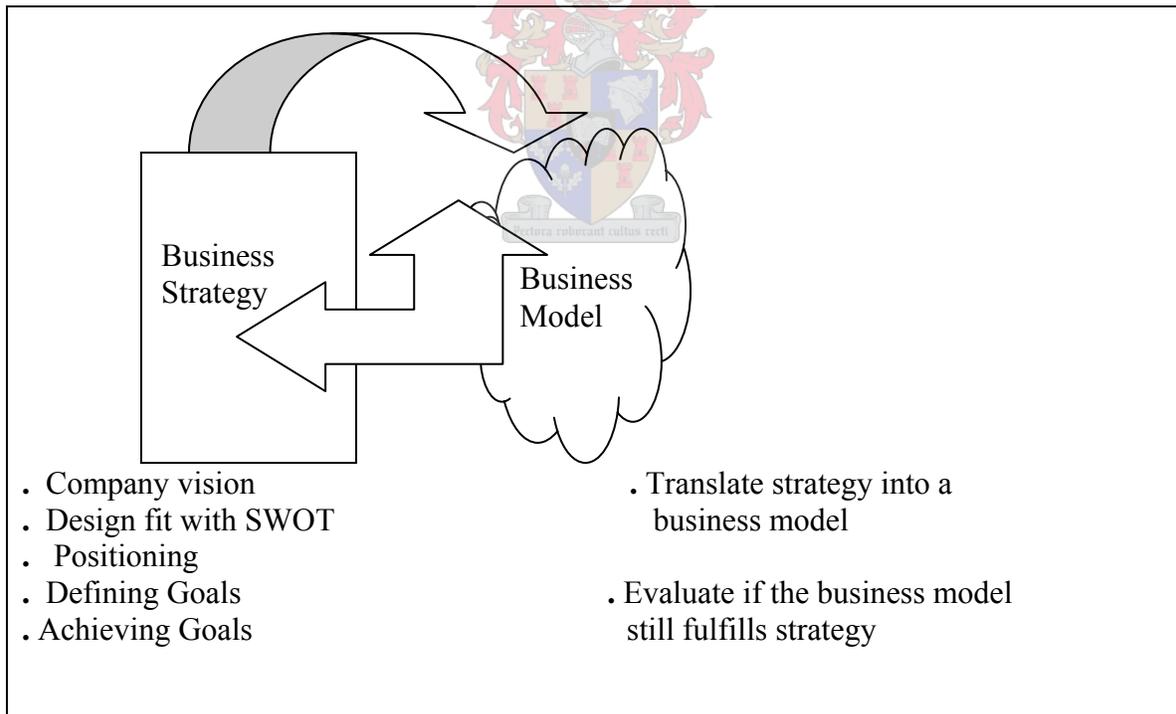
Source: Hamel (2000). Leading the Revolution. Boston: Harvard Business School Press,55.

### 2.2.3 Strategy and Business Models

The first element in the triangle described above is business strategy. (Mintzberg and Lampel, 1999) describe strategy as an elephant of which we can only grab hold of some

part or other. This is a nice metaphor for the fact that business strategy is an enormous domain in which little consensus exists and a variety of schools reign. Different views include that strategy is about providing a company vision, designing an organization that achieves a fit between internal strengths and weaknesses and external threats and opportunities (Learned, Christensen et al. 1965), positioning the company in the market (Porter 1985), defining a set of goals and objectives (Drucker 1954; Kaplan and Norton 1992), the steps to achieve them and the way to measure them (Kaplan and Norton 1992). In this dissertation you will agree that the business model and strategy talk about similar issues but on a different business layer. And understand the business model as the strategy's implementation into a conceptual blueprint of the company's money earning logic. In other words the vision of the company and its strategy are translated into value propositions, customer relations and value networks (see figure 3).

Figure 3: The link between Business Strategy and Business Model



Source: Hamel (2000). Leading the Revolution. Boston: Harvard Business School Press,89.

## 2.2.4 Business Organization and Business Models

The second element of the triangle surrounding business model is the organizational side. Similarly to strategy and business model layer the business organization layer talks about similar issues (e.g. structure) but addresses them from a different angle. The business organization is about the "material" form the conceptual business model takes in the world, such as departments, units and workflows (see figure 4). This is not to be confused with the business model, which illustrates a company's money earning logic as a set of concepts. Yet, the business organization and business model are closely interrelated (see Illustration Box 1).

### Illustration Box 1: Business Organization and Business Model at Compaq

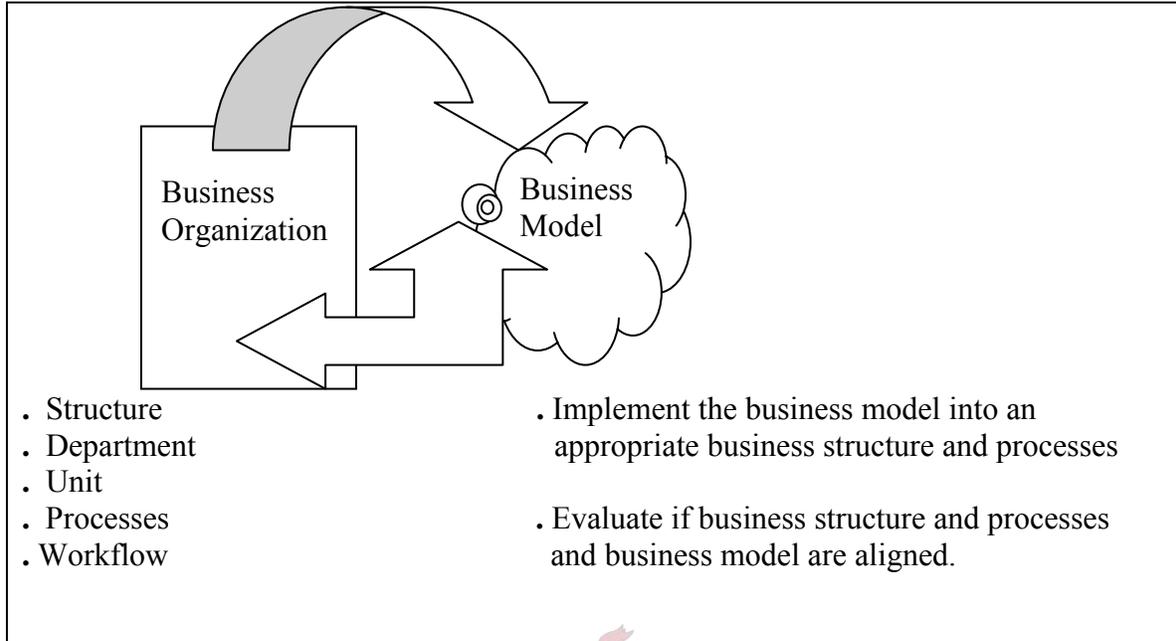
#### **Compaq vs. Dell**

The then dominating computer manufacturer Compaq (now HP) came under pressure by Dell in the 90s, when this competitor was extremely successful with its direct-to-customer approach that heavily relies on the Internet. Compaq was forced to rethink its strategy because it was constantly losing ground in the PC market. As an apparently logic consequence Compaq introduced its own direct Internet distribution channel on the Internet into its business model. However, the company forgot to align this new business model with its business organization. The outcome was a hostile reaction from its resellers, who said that Compaq was competing with them.

Source: Govindarajan and Gupta (2001), 21.

Changes in the business model bring up organizational question, which is illustrated by the fact that companies didn't really know how to structurally cope with their new online outlets in the 90s. When a large number of companies started selling over the Internet they used different organizational approaches regarding their new online channels (Schmid et al, 2001). Some created entirely new departments, others put their existing IT department in charge and yet others created completely new companies in which they had a majority stake.

Figure 4: Business Organization and Business Model



Source: Hamel (2000), 78.

Furthermore, a good understanding of the infrastructure side of a business model leads to an optimized business organization. By precisely defining infrastructural aspects of a business models, such as the supply chain and the various partnerships and links a company maintains it becomes much easier to address questions related to processes or, for example, business process outsourcing (BPO).

### 2.2.5 ICT and Business Models

The last element in the triangle is technology, or more precisely ICT. Under ICT, understand all the information and communication technology used in the company. This includes hardware, such as PCs, servers, PDAs and mobile phone as well as software and tools, such as Websites, customer relationship management applications, management information systems and so on. The link between ICT and business models is particularly strong, since ICT has been a strong enabler for a variety of innovative business models.

### Illustration Box 2: Relying on ICT

#### **Relying on ICT: Amazon.com and eBay**

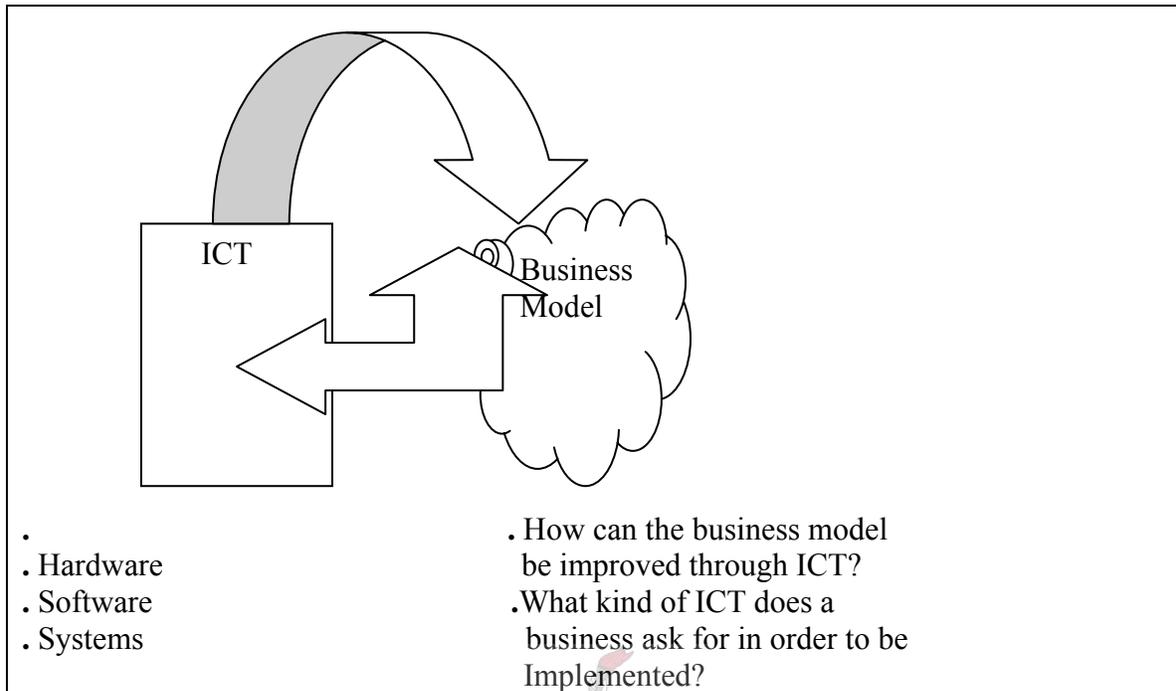
The most extreme examples of the relationship between ICT and business model are web-based companies like Amazon.com or eBay. They have business models that rely to a great deal on ICT and specifically the Internet. Besides the most evident dependencies on websites and servers they also improve their business model through a number of customer related applications, like personalized recommendations or rankings.

Source: Govindarajan and Gupta (2001), 43.

Sometimes the link between ICT and business model is evident as in the case of online companies such as Amazon.com or eBay (see Illustration Box 2). However, the link between technology and business model does not have to be so obvious. When communication and coordination costs dramatically decreased because of shrinking ICT costs, this had an enormous indirect impact on business models. It became much easier for companies to work in networks and offer joint or complementary value propositions. Also, companies increasingly included informational aspects or even ICT enriched components into their products and services.

In general, technology people should ask themselves how ICT can contribute to improving a company's business model. And the other way around, business people should ask themselves what technological consequences a change in the business model could have (see figure 5).

Figure 5: ICT and Business Model.



Source: Hamel (2000), 67

### 2.2.6 Environment and Business Model

Besides relating to the elements in the triangle a company's business model is continuously subject to external pressures that oblige a company to constantly adapt their business model to a changing environment (Hamel, 2001). In this section, lists of some of the pressures that directly or indirectly influence a business model have been considered. These are technological change, competitive forces, change in customer demand and change in the social or legal environment.

**Technological change:** technology (e.g. ICT) and its application in business are rapidly changing. And since technology is increasingly applied to every aspect of business, technological change pressures managers to reflect on how technology can be adopted to improve the business logic of the firm, with the rise of the Internet companies started Adopting new web-based channels. Some even tried to figure out how their products could be entirely digitized or at least "digitally enhanced". Also, falling communication and coordination costs due to cheaper technology have forced companies to become more

efficient. They started to outsource all non-essential business and progressively rely on partnerships. It is no understatement to say that technological change is a major force of business model change. In some cases technological change may even challenge the mere existence of a particular business model (Ethiraj et al. 2000).

**Competitive forces:** a second-major pressure on a company's business model comes from its competitors. The example of Compaq and Dell that competed for customers with two different business models in the PC-industry is a good one. For traditional industry players adapting to changes in the competitive environment is especially crucial when new dynamic competitors rapidly dispute their market position as an incumbent (Christensen, 1997 and 2003).

**Customer demand:** pressure to adapt a company's business model may also come from the customer demand side. Changes in consumption patterns, revenue increases and "fashion changes" are just some of the possibilities that must be mentioned. The shift from fixed-line to mobile telephony is a good example of change in customer demand.

**Social environment:** sometimes the social environment and social mood can influence the business model of a firm. This kind of pressure is particularly studied in stakeholder theory (Friedman and Miles, 2002). For instance, if a company's business model is centered on low cost production in developing countries it might draw the attention of militant non-governmental organizations that could mobilize public opinion against the firm. This happened to Nike regarding the ethics of its operations in Vietnam (Kahle, Boush et al. 2000). Besides ethics, changes in the social environment will also have an indirect influence on customer demand. This is the case for technology adoption, where the use and social acceptance of a specific technology by a broad majority opens up completely new markets and customer demands (Moore, 1999).

**Legal environment:** often changes in the legal environment also make it necessary to adapt business models. The introduction of new privacy laws can make the use of some

business models illegal, if a company has extensively relied on customer information without the customer's explicit accord.

Anti-spamming laws may (hopefully) wipe-out business models based on sending out large trunks of unsolicited mails. Regulating advertisement over mobile phones may limit the range of possible business models in m-commerce. New taxes may make a company's value proposition too costly and thus uninteresting for the customer. In general it can be said that the legal environment has a large influence on business models.

### **2.3 Business model literature.**

Surprisingly, the mainstream appearance of the term business model is a relatively young phenomenon that has found its first peak during the Internet hype at the beginning of this millennium. A query in Business Source Premier, a leading electronic database for business magazines and scholarly business journals, shows that the term appeared in 1960 in the title and the abstract of a paper in the Accounting Review (Jones 1960). But the boom of the expression business model has taken place in the 1990s. The term is found in numerous variations, such as “new business models”, “ebusiness models” or “internet business models”. However, it can be said that the expression was inflated through journalists, business people and academics that used it in relationship with ecommerce, start-up companies and high tech companies. It seems that the executives, reporters, and analysts who used the term “business model” never really had a clear idea of what it meant. They sprinkled it into their rhetoric to describe everything from how a company earns revenue to how it structures its organization (Linder and Cantrell 2000).

#### **2.3.1 Business model definition**

Paul Timmers, working for the European Commission, was one of the first to explicitly define and classify business models (Timmers, 1998). He understands a business model as the architecture for the product, service and information flows, including a description of the various business actors and their roles and a description of the potential benefits for

the various business actors and a description of the sources of revenues. In order to understand how a company realizes its business mission he adds a marketing model that is the combination of the business model and the marketing strategy of the business actor under consideration. Like Timmers, Weill and Vitale (Weill and Vitale, 2001) define a business model as a description of the roles and relationships among a firm's consumers, customers, allies and suppliers and it identifies the major flows of product, information, and money, as well as the major benefits to participants.

In their business model definition (Linder and Cantrell, 2000) from the Accenture Institute for Strategic Change differentiate between three different types of models: the components of a business model, real operating business models and change models. They define a business model as an organization's core logic for creating value. Similarly, (Petrovic, Kittl et al. 2001) perceive business models as the logic of a business system for creating value. They specify that this is in opposition to a description of a complex social system itself with all its actors, relations and processes. Referring to this (Gordijn, Akkermans et al. 2000) mention that in research as well as in industry practice, often business models are wrongly understood as business process models, and so can be specified using UML activity diagrams or Petri nets. They explain that this is a misunderstanding and that a business model is not about processes but about value exchanged between actors. In their opinion the failure to make this separation leads to poor business decision-making and inadequate business requirements.

Like (Petrovic, Kittl et al. 2001), (Applegate, 2001) perceives a business model as a description of a complex business that enables the study of its structure, of the relationships among structural elements, and of how it will respond to the real world. In this regard (Stähler, 2002) reminds that a model is always a simplification of the complex reality. It helps to understand the fundamentals of a business or to plan how a future business should look like. (Magretta, 2002) adds that a business model is like a story that explains how an enterprise works. And like Stähler she distinguishes the concept of business models from the concept of strategy. She explains that business models describe,

as a system, how the pieces of a business fit together, but as opposed to strategy do not include performance and competition.

(Tapscott, Ticoll et al. 2000) do not directly define business models, but what they call b-webs (business webs). A b-web is a business on the internet and represents a distinct system of suppliers, distributors, commerce service providers, infrastructure providers, and customers that use the Internet for their primary business communication and transactions. Similarly, another highly network-centered approach is provided by (Amit and Zott, 2001). They describe a business model as the architectural configuration of the components of transactions designed to exploit business opportunities. Their framework depicts the ways in which transactions are enabled by a network of firms, suppliers, complementors and customers.

A series of authors introduce a financial element into their definitions. (Afuah, Tucci; 2003) state that each firm that exploits the Internet should have an Internet business model. They understand it as a set of Internet- and non-Internet-related activities that allow a firm to make money in a sustainable way. (Hawkins, 2001) describes a business model as the commercial relationship between a business enterprise and the products and/or services it provides in the market. He explains that it is a way of structuring various cost and revenue streams such that a business becomes viable, usually in the sense of being able to sustain itself on the basis of income it generates. (Rappa, 2001) defines a business model as the method of doing business by which a company can sustain itself -- that is, generate revenue. For him the business model spells-out how a company makes money by specifying where it is positioned in the value chain.

### **2.3.2 Business model components**

While defining what business models actually are has brought some order into the confusion, many authors have gone further to define of what elements business models

are composed of. This is the first step to making business models a tool for business planning that help managers understand and describe the business logic of their firm. In this section, these attempts have been outlined to define the business components, also referred to as “elements”, “building blocks”, “functions” or “attributes” of business models. This literature has been classified among two main aspects, which are, on the one hand product, business actor- and network-centric literature and on the other hand marketing-centric literature. The authors of the second category most often cover both aspects mentioned above.

However, it must be said that the different approaches and business model component descriptions vary greatly regarding their depth and rigor, ranging from simple enumerations to detailed descriptions. Some of these concepts are highly abstract and very precise and some are merely lists of relatively low conceptual contribution

### **2.3.2.1 Product-, Actor- and Network-Centric Business Model Frameworks**

(Mahadevan, 2000) indicates that a business model consists of a configuration of three streams that are critical to the business. Firstly, the value stream, which identifies the value proposition for the business partners and the buyers. Secondly, the revenue stream, which is a plan for assuring revenue generation for the business. Thirdly, the logistical stream, which addresses various issues related to the design of the supply chain for the business.

(Afuah and Tucci; 2003) in contrast explain that a business model should include answers to a number of questions: What value to offer customers, which customers to provide the value to, how to price the value, who to charge for it, what strategies to undertake in providing the value, how to provide that value, and how to sustain any advantage from providing the value. The business model approach they outline is value-centered and takes in account the creation of value through several actors. In their conception of a business model one can find a list of business model components presented in Table 1.

Table 1: Afuah and Tucci's elements of a business model (2003)

<b>Component</b>	<b>Questions for all business models.</b>
<b>Customer Value</b>	The firm must ask itself if it is offering its customers something distinctive or at a lower cost than its competitors
<b>Scope</b>	A company must define to what customers it is offering value and what range of products and services embody this value
<b>Pricing</b>	Pricing is about how a firm prices the value it offers
<b>Revenue Source</b>	A firm must ask itself where the income comes from and who will pay for what value and when. It must also define margins in each market and find out what drives them.
<b>Connected Activities</b>	The connected activities lay out what set of activities the firm has to perform to offer its value and when. It explains how activities are connected.
<b>Implementation</b>	A company has to ask itself what organizational structure, systems, people, and environment suit the connected activities best. It must define the fit between them.
<b>Capabilities</b>	A firm has to find out what its capabilities are and which capability gaps it has to fill. It should ask itself if there is something distinctive about these capabilities that allow the firm to offer the value better than other firms and that makes them difficult to imitate.
<b>Sustainability</b>	A company should understand what it is about the firm that makes it difficult for other firms to imitate. It must define how it can keep making money and sustain a competitive advantage.

Source: Afuah and Tucci (2003), 56.

In line with Timmers' business mode description above (1998), (Stähler, 2001; 2002) has a network centric approach to business models and also excludes the marketing model from his business model framework. For him a business model consists of four components as summarized in Table 2. Firstly, a business model contains a description of what value a customer or partner (e.g. a supplier) receives from the business. Stähler calls this the value proposition. It answers the question of what value the business creates for its stakeholders. Secondly, he introduces a link between the firm and the customer, which is the product. Thus, a business model contains a description of the product or services the firm is providing the market. It answers the question of what the firm sells. Thirdly, a business model contains the description of the architecture of value creation. The value

architecture delineates the value chain, the economic agents that participate in the value creation and their roles. The value architecture answers the question of how the value is created and in what configuration. Finally, a business model describes the basis and the sources of income for the firm. The value and the sustainability of the business are being determined by its revenue model. This component answers the question of how a company earns money.

Table 2: Stähler's business model components (based on (Stähler 2001; and 2002))

<b>BM component</b>	<b>Questions to ask</b>
<b>Value Proposition</b>	What value does the company create for customers and partners?
<b>Product/Services</b>	What does the firm sell?
<b>Architecture</b>	How and through what configuration is value created?
<b>Revenue Model</b>	How does the company earn money?

Source: Stähler (2001), 98 and (2002), 56.

Similar to (Stähler, 2001) and also based on (Timmers, 1998), (Papakiriakopoulos and Poulymenakou, 2001) propose a network-centric business model framework that focuses on actors and relationships. Their model consists of four main components, namely coordination issues, collective competition, customer value and core competences. The first component aims at defining the management of dependencies among activities. For example the sharing of an information resource among several actors requires coordination mechanisms that affect the structure of the organization. The second component, collective competition, describes the relationship to other companies, which can be competitive, co-operator, or both at the same time. This construct resembles the concept of competition described by (Brandenburger and Nalebuff, 1996). The third component, customer value, aligns the business model with the market and customer needs. Finally, the core competencies define how a firm exploits its resources facing the opportunities of the market. (Maitland and Van de Kar, 2002) apply a business model concept to a number of case studies in the mobile information and entertainment services. They describe the value proposition, the market segment, the companies involved and the revenue model of different innovative companies in the mobile telecommunications service industry.

(Chesbrough and Rosenbloom, 2000) simply list six main functions of a business model. These are the articulation of the value proposition, the identification of the market segment, the definition of the structure of the value chain within the firm, the definition of the cost structure and profit potential, the description of the position of the firm within the value network, including identification of complementors and competitors and finally the formulation of the competitive strategy.

Unlike most other authors on business model components (Alt and Zimmermann, 2001) include elements such as mission, processes, legal issues and technology into their framework. The six generic elements they mention are outlined in Table 3.

Table3: Alt and Zimmermann's 2001 business model elements.

<b>BM element</b>	<b>description</b>
<b>Mission</b>	A critical part of the business model is developing a high-level understanding of the overall vision, strategic goals and the value proposition including the basic product or service features.
<b>Structure</b>	Structure determines the roles of the different agents involved and the focus on industry, customers and products.
<b>Processes</b>	Processes provide a more detailed view on the mission and the structure of the business model. It shows the elements of the value creation process.
<b>Revenues</b>	Revenues are the "bottom line" of a business model
<b>Legal issues</b>	Legal issues influence all aspects of the business model and the general vision
<b>Technology</b>	Technology is an enabler and a constraint for IT-based business models. Also, technological change has an impact on the business model design.

Source: Zimmermann (2001), 79.

### 2.3.2.2 Marketing-Specific Frameworks

Authors presented in this section include marketing specific issues into their business model frameworks. A very interesting business model proposition has been developed by (Hamel, 2000). For him a business model is simply a business concept that has been put into practice, but for which he develops a number of elements. He identifies four main business model components that range from core strategy, strategic resources over value network to customer interface. These components are related to each other through three

“bridges” and are decomposed into different sub-elements. The main contribution of this concept illustrated in Table 4 is a view of the overall picture of a firm.

Table 4: Hamel’s 2000 business model components

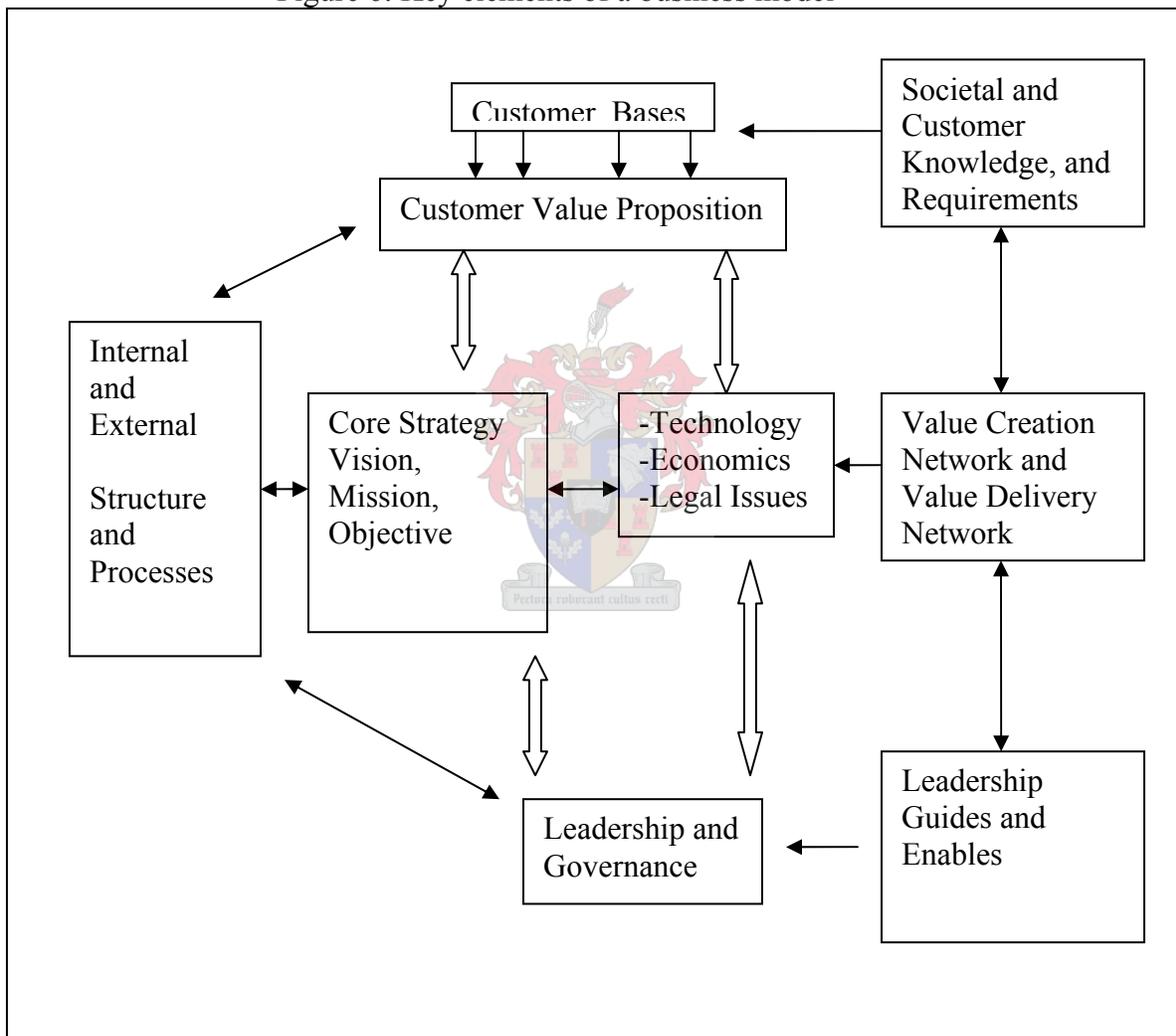
<b>Name</b>	<b>Description</b>
<b>Core Strategy</b>	Core Strategy This element defines the overall business mission, which captures what the business model is designed to accomplish. Further, it defines the product and market scope and specifies in what segments the company competes. Finally, it outlines how the firm competes differently than its competitors.
<b>Strategic Resources</b>	This element contains the core competencies of a firm. In other words, what a firm knows, its skills and unique capabilities. Then it specifies the strategic assets, such as infrastructure, brands and patents. Last, this element outlines the core processes of the firm; it explains what people actually do
<b>Customer Interface</b>	This element is composed of fulfilment and support, which refers to the way the firm goes to market and reaches its customers (e.g. channels). Second, information and insight defines all the knowledge that is collected from and used on behalf of the customer. Third, the relationship dynamics refer to the nature of the interaction between the producer and the customer. Finally, the pricing structure explains what you charge the customer for and how you do this.
<b>Value Network</b>	The value network outlines the network that surrounds the firm and complements and amplifies the firm’s resources. It is composed of suppliers, partners and coalitions. Partners typically supply critical complements to a final product or solution, whereas coalitions represent alliances with like-minded competitors.
<b>Configuration</b>	This connection refers to the unique way in which competencies, assets, and processes are combined and interrelated in support of a particular strategy.
<b>Customer Benefits</b>	This link intermediates between the core strategy and the customer interface. It defines the particular bundle of benefits that is actually being offered to the customer.
<b>Company Boundaries</b>	This bridge refers to the decisions that have been made about what the firm does and what it contracts out the value network.

Source: Hamel (2000), 38.

From the above analysis of various generic elements of a business model, the term “business model” can be defined for purpose of this study as follows (see figure 6).

The particular business concept (or “way of doing business”) as reflected by the business’s core value proposition for customers, its configurations value network to provide that value, consisting of own strategic capabilities as well as other (e.g. outsourced/allianced) value networks, and its leadership and governance enabling capabilities to continually sustain and reinvent itself to satisfy the multiple objectives of its various stakeholders (including shareholders).

Figure 6: Key elements of a business model

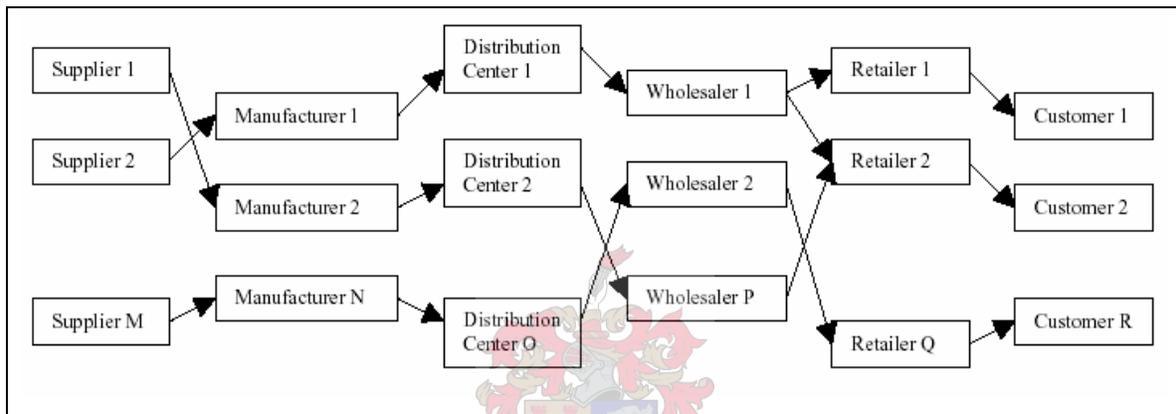


Source: Hamel (2000), 98.

## 2.4 Demand and supply chain dynamics

In the early 1990s, the phrase “supply chain management (SCM)” came into use. The original motive of SCM was “elimination of barriers between trading partners” in order to facilitate synchronization of information between them. Recent literature offers many variations on the same theme when defining a supply chain. A working definition

Figure 7 A simple supply chain



Source: A.T Keatney Inc (2002), 45.

by (Stevens G.C., Vol-19, pp 3-8, 1989) defines a supply chain as “a connected series of activities that is concerned with planning, coordinating and controlling materials, parts, and finished goods from supplier to customer. It is concerned with two distinct flows (material and information) through the organization.” Many authors consider strategic decision-making and systems integration a differentiating virtue of supply chains. Still others consider carriers, and sometimes even the government, as integral components of a supply chain. (Tayur, et al. 1999) provide a comprehensive review of supply chain literature, including definitions of the terms used in this field.

Figure 7 shows the structure of a typical supply chain. It consists of a number of units – beginning with suppliers, who provide raw materials to factories or manufacturing plants, which manufacture products and send them to distribution centers. This transport them to

regional distributors or wholesale dealers, who ship them to retailers. The end of a traditional supply chain is usually the customer, who buys products from the retailer. Although this composition is typical, supply chains vary in length. Different industries might have slightly differing structures of their supply chain. A manufacturing giant might have a highly structured distribution network – comprising of central warehouse, regional warehouses and local warehouses – through which a product goes before it reaches the retailer. Or, a small, regional company may suffice with having just one distributor for supplying products to its retailers. An entire supply chain could exist within one company. Or a supply chain can span multiple enterprises before it reaches the customer. Traditionally, planning, purchasing, manufacturing, distribution, and marketing operated independently along the supply chain. Each activity had its own set of objectives and often, these objectives were conflicting (for example – manufacturing operations may be designed to maximize throughput and minimize costs, with little consideration for inventory levels, distribution capabilities or market demand). Supply chain management has evolved as a strategy to coordinate activities of these independent functions, and Create a single, integrated plan for the entire organization.

Figure 8 Supply chain decisions



Source: Thompson and Strickland (1998), 110.

In a supply chain, decisions taken are usually classified as strategic, tactical, or operational. (Cole, 1999) Strategic decisions are usually linked with the company's corporate strategy, and guide the design of the supply chain. They are typically made over a long period of time (2-5 years or more), and traditionally involve all partners in the supply chain. Tactical decisions are taken on a monthly to annual basis, whereas operational decisions are short term, and directly affect day-to-day activities. Tactical and operational decisions are traditionally taken independently in individual units of the supply chain – in a warehouse, on the shop floor in a factory, etc. They deal with forecasting, procurement, production and inventory management, warehousing and distribution, and logistics issues. For example, in a soap factory, deciding which type and what quantity of soaps should be produced during the current week, and which machines and assembly lines should be used for this purpose, are operational decisions. MRP, MRP II and ERP help enterprises take tactical and operational decisions.

Every company performs five basic activities in its supply chain: buy, make, move, store and sell. There are a multitude of decisions, strategic, tactical and operational, to be taken at each of these five actions. These are listed in Table 5. Supply chain simulation tools are commonly used to derive the optimal answers to strategic issues proposed in Table 5. The most common representation of a supply chain is a multi-commodity, multiple sources, and multiple sinks network. (Hicks, pp 1215-1220, 1999) proposes a four step methodology for using simulation and optimization techniques for reaching these strategic decisions. The network is first modeled as a set of nodes and arcs, and a linear-mixed-integer-programming problem is formulated. Powerful optimization solvers are applied on this network to evaluate total costs. Step 2 consists of simulating the network over a period of time in order to observe its behavior. The result is a supply chain network design, including the structure and a proposed policy scheme. In step 3, the policy is optimized using simulation-optimization. The final step is testing the design for robustness.

Table 5 Supply chain activities

Activity	Strategic Decision	Tactical & Operational Decision
Buy	Choosing suppliers, long term contracts vs. short term deals	Type and quantity of raw material to be purchased, date, time and location of arrival
Make	Factory locations, Product lines, Proximity to end customer	Scheduling production, allocating resources
Move	Setting up transportation network, outsourcing vs. in-house function	Planning optimal routes for trucks
Store	Distribution network design, warehouse locations	Loading / unloading operations, book-keeping
Sell	Demand forecasting, special promotions	Order fulfillment, customer service

Source: Hicks (1999), 1215.

The objective of supply chain management activities is to meet customer demand for guaranteed delivery of high quality, low cost, customized products with minimal lead time. The attempt is to improve responsiveness, understand consumer demand, intelligently control the manufacturing process, and align together the objectives of all partners in the supply chain. (Krajewski, 1999) To achieve this objective, companies need to have visibility into the entire supply chain of transaction and planning systems – of its own plans as well as those of its suppliers and customers. Also, the company should be flexible enough that it can adjust, rebuild and re-optimize plans in real time, to take care of unexpected events taking place in the supply chain.

These needs have propelled the development of optimization packages for managing the entire business process, beginning with advanced planning and scheduling (APS) tools to help companies match their supply with demand, and later integration with modules for customer relationship management and product lifecycle management.

From (Hamel, 2002), the rules have changed. Agility, time-to-market, and customer satisfaction still give your company a competitive edge. But in the new marketplace, you need to move faster and more efficiently than ever before. Increased computing power and high-speed ubiquitous Internet communications give players new tools and new

abilities. The result is a new realm for the exchange of goods and services, beyond the traditional demand and supply chain dynamics—the Net economy. This quantum leap in the efficiency, productivity, and total output of the economy is enabled by inter-enterprise integration.

Customers still want the right products and services, at the right time, in the right place, and at the right price. In order to satisfy that demand, an enterprise must examine its supply and demand chains—or its entire value network—to ensure that excellence exists throughout the process to achieve correct delivery (Peter J. Perkins, 1999).

Value networks have grown out of the Net economy revolution, the disruptive fusion that rewrites virtually every rule of commerce. The companies that will survive in the Net economy are those that understand the intercompany best practices needed to serve their customers and, by extension, their customers' customers (Peter J. Perkins, 1999). By converging your customers, your competitors, and your company into shared ecosystems, value networks fuse traditional demand and supply chains. The result is a multitude of collaborative communities consisting of common visibility and decision support networks. These value networks replace the common practice of locked-in sequences of one-to-one trading partner supply or demand chain links (Chopra, et al. 2001). So where companies once organized or grew functionally to gain efficiency, they are now collaborating with their partners and outsourcing in areas that do not represent their core competencies. This allows them to focus on and enhance those things that they do best and which set them apart.

To successfully achieve optimal value network fusion, companies first integrate internal functions, then optimize across these functions, and ultimately extend the value of the optimized internal systems to collaborate with their partners. While it is not necessary to start internally, generally speaking, it is preferable to get your own house in order first. In the end, your software selection must focus on choices that extend and reinforce your core competencies (Clippinger, 1999).

In order to leverage these new value networks and exploit business-to-business collaboration, you start by mapping where your company and your trading partners are experiencing the greatest efficiencies and inefficiencies in enterprise and inter-enterprise business processes. By identifying core and non-core competencies, each entity can focus on its unique value or strength and collaboratively outsource non-value-added activities, as well as find partners who fit the gaps. The message of the Net economy is that there are multiple relationships: We have moved from a "command and control" to a "sense and respond" environment. You will constantly be assessing your core competencies and your relationships as the Net fusion continues. And the focus will be on the customer (Chopra, et al. 2001).

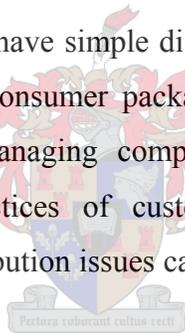
For (Prahalad, et al. 1998), core competencies are the key strengths of an organization that define how it is perceived by the marketplace. Most core competencies are customer-facing attributes—qualities that make the enterprise and its products or services unique. They are competitive strategic assets that demonstrate the value you bring to your customers. But they are also those assets that determine how you will stand up to new threats from competitors you never knew existed because of the radically changing technology landscape. Identifying and exploiting these unique attributes will allow you to compete aggressively in the explosive Net economy.

To find core competencies, manager will need to examine not only what the company does well, but also what differentiates you from others who do the same thing well (Prahalad, et al. 1998). Start by benchmarking yourself against industry standards. Look at related businesses. Also, look outside the box. Examine other industries that may serve different markets or produce different products or services, but have similar core processes. For example, it could be argued that most large pharmaceutical manufacturers are best in class in the research and development of life-saving drugs; however, none are noted for their supply chain execution capability. Benchmarking R&D across the pharmaceutical industry helps to identify gaps in strategic core competencies which provide competitive advantage.

Supply: A simple supply base includes commodity-like products that are in abundant supply, such as ingredients for food or sand for glass, and involves relationships with only a few vendors. Examples of complex supply issues include dealing with a large number of suppliers or dealing with long lead times and rationing of items. For firms with complex supplier management issues, purchased material can represent up to 80 percent of the value of their product.

Manufacturing: Simple manufacturing often involves relatively simple assembly (PCs) or process steps (food recipes). Complex manufacturing can involve a large number of variants and options to be managed (automotive system suppliers), or just the sheer size of the task at hand (aerospace). For these manufacturers, often more than 50 percent of costs occur during production.

Distribution: Many high-tech firms have simple distribution processes, shipping directly to end users. On the other hand, consumer packaged goods manufacturers have very complex distribution networks. Managing complex promotions and packaging and accommodating the business practices of customers also create demand on the distribution channel. Complex distribution issues can drive up to 50 percent of the cost of the delivered product.

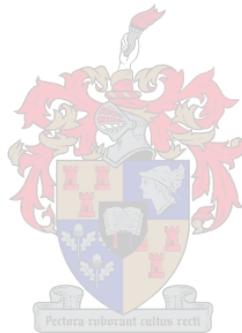


For (Porter, 1990), the competitive advantage comes in the execution rather than the technology itself. In general, corporations increasingly need to take advantage of standards-based technologies wherever possible, as opposed to building purely homegrown, expensive solutions. Not only will this help you quickly understand and integrate internal processes, but it will also facilitate your ability to collaborate with your potentially diverse trading partners. However, because core competencies are what make an organization unique, often the technology that supports them is also unique. In these cases, you look at your non-core competencies to select software in the ecosystem (Peter J. Perkins, 1999).

## 2.5 Summary

Business models are perhaps the most discussed and least understood of terms. It is widely used in both academic and practice with a misinterpretation of the term. A comprehensive understanding of the dimensions and key elements of business models from many authors, have been necessary to establish a working definition of the concept.

For the purpose of this paper, the concept of business model is defined as the way of doing business, as reflected in particular customer base, particular products, particular value chain configuration, and particular capabilities and policies.



## **CHAPTER 3**

### **THE NEED FOR NEW BUSINESS MODELS**

#### **3.1 Introduction**

Global competition, deregulation and technology are driving major shifts in almost every industry and across industries (Rometty, 1999). The old principles no longer work in the new age because of the fact that Businesses have reached the old model's limits with respect to complexity and speed. The real problem is "a ruinously dysfunctional mismatch between today's business environment and the classic business model... Quite simply, the wrong model may transform a company into the vehicle of its own death."

Most business models are based on traditional ways of strategy formulation and implementation, leading to incremental and not disruptive change in the nature of business and industry practices. As noticed in chapter 3.

Great shifts - genuine and radical transformation - have been shaping the economy and business environment in recent decades. Technology, especially information and communication one, has radically altered the requirements for building and managing a successful business. In this new business climate, although the basic command-and-control business model has survived, it has lost its effectiveness significantly.

In a world where consumer electronics (CE), information technology (IT), telecom, and media are converging, tremendous opportunities for (user centric, demand based, and context aware) mobile services are emerging. With increasing marketplace dynamics and rapid technological developments, the ability to imagine and combine different, formerly separated, technological capabilities in order to facilitate new and valuable user experiences will be a key factor. To be able to offer these experiences, new business models are needed (Galli et. al, 2005).

Based on a survey of 4,018 executives' worldwide and in-depth interviews with leading decision makers, the Economist Intelligence Unit (2005) finds that companies that best

understand dynamics like the ones mentioned above and adapt fastest and differently to the emerging business landscape with innovative as well as adaptive business models will be the likeliest to prosper. In other words, innovative and adaptive business modeling is critically important to the future of (technological) innovation. There are many famous cases in which companies have developed disruptive technologies, but have failed to capitalize on them with viable accompanying business models. For example, the Xerox Palo Alto Research Center (PARC) invented a lot of interesting technologies but the shareholders of Xerox Corporation did not profit as much from these innovations as others did (Chesbrough, 2003). Eventually, the ability to innovate with business models and revise them regularly is equally important as innovation in products or services (Economist Intelligence Unit, 2005) because successful innovations often need innovative business models as much as innovative product offerings (Chesbrough, 2003).

The focus in this chapter will be on creating new business models from techniques and approaches put forward by (Govindarajan and Gupta, 2001), (Hamel, 1998), and Youngblood, 1997). Because developing new business models requires discarding conventional beliefs and established ways of doing business. However, the challenge for top management is to let go of industry orthodoxy and lead their companies into constantly developing new business models. The chapter will be concluded by a summary.

### **3.2 What is wrong with traditional approaches to strategic management?**

Business strategy and strategic management have long been viewed as the concept and process that link an organization and its environment. The current turbulence and significant shifts in the environment mean that traditional ways of articulating strategy and practicing strategic management have to be seriously reconsidered. Since the 1950s, various approaches to strategic management have been popularized, and some have served very well in their particular eras. With a significant new era of massive, revolutionary change – the era of the knowledge economy – having been entered during the late 1990s, it is becoming evident that all of the traditional approaches to strategic

management are showing serious deficiencies in dealing with the discontinuous links between an organization and the environment. The conventional approaches simply cannot comprehensively deal with the richness and diversity of creativity, innovation and inventions now enabled by the knowledge-networked economy, and causing rapid shifts in traditional industry boundaries, the rise of significant new industries, and a plethora of new business models being devised and implemented (From Leibold et al., 2002).

### **3.3 Challenges to Incumbent Companies**

The term “incumbent” is used to describe companies that are already established in an industry, or those that have been market leaders at some point. The word “insurgent” is used to describe start-ups and new entrants or competitors in an industry.

“The most venerable can prove to be the most vulnerable” – this is how (Evans and Wurster, 2000, p.4) describe industry incumbents’ susceptibility in the new economy. (Murtagh, 2001) cautions that one of the major mistakes that established companies can make is to assume that their only competitors are their historic rivals. (Hamel, 2000) also cautions that for most businesses, the newest and most aggressive competitors are usually companies that were not in the same business before.

Changes in the environment, such as new technologies, can also suddenly obliterate brands and businesses that have been established for many years. Managers’ conventional “cognitive maps” of the industry make it difficult for them to see emerging changes in their markets. These cognitive maps influence and shape managerial decisions, especially in terms of selecting the competitive arena and the competitors with which the firm competes (Zahra, 1999)

In a highly competitive business environment, (Useem, 1999) explains that incumbents face two choices: either to protect still profitable technologies and models, or to preemptively destroy them, even if it means terminating the very revenue sources upon which the company is founded. The second alternative is the kind of dilemma incumbents

are faced with since it entails embracing new technologies that will destroy the value of past investments. In short, it means doing things that infringe the conventional way of doing business.

In general, large organizations resist disruptive change partly because the kind of change being required is radical and challenging. This is because it is no longer a matter of incremental change, but realizing a discontinuous transformation in both organizations and industry (Pascale and Millemann, 1997).

The following sections describe some of the difficulties incumbents face in the new competitive landscape.

### **3.3.1 “Good” Management**

Useem (1999) maintains that incumbents are bound to lose their market share to new entrants when faced with disruptive technologies that make existing ones obsolete. This is because corporate managers disregard important new technologies and markets precisely because they are “good managers”. They have what he refers to as “excess of rationality”. But these rational instincts serve well only when it is a matter of incrementally improving existing offerings. Christensen (1997) also cites that many of what are now widely established principles of good management are only situationally appropriate.

What Christensen calls one of the ‘innovator’s dilemmas’ is that “blindly following the maxim that good managers should keep close to their customers” (1997, p.4) can prove to be a serious mistake. “There are times at which it is right not to listen to customers, right to invest in developing lower-performance products that promise lower margins, and right to aggressively pursue small, rather than substantial, markets” (1997, p.xii).

However, Evans and Wurster (2000) point out that it is difficult for established companies to downsize assets that have high fixed costs, to cannibalize current profits, to

discard core competencies that were built over a long period of time, to destroy the business when many customers still prefer the current business model, and to cut-off long-term relationships and obligations with partners and distributors.

In suggesting reasons why good managers become paralyzed when faced with disruptions, Christensen, et al. (2001) propose the following points:

- Because disruptive technologies perform significantly worse than mainstream products in the beginning, the leading companies' most attractive customers will not use them. The more carefully companies listen to their best customers, therefore, the less they will recognize that the disruption is important.
- Such companies carefully measure the size of markets and their growth rates to understand their customers better. But disruptive technologies foster new products and services with a market impact that cannot be easily predicted.
- Good managers focus on investing where returns are the highest. Disruptive innovations, however, usually translate into cheaper products with lower profits margins.
- As companies become successful and grow, their managers are compelled to pursue large markets and maintain their growth rates. But the emerging markets for disruptive innovations are much smaller at first than mainstream markets and cannot provide the enormous volumes of new business that keep a large company growing.

### **3.3.2 Limited perspectives of top management**

Success of a company tends to block its broader view of opportunities available in the new economy as a whole. This is often a problem with top management having too little perspective (Kelly, 1998). One reason for this is the history and the shared values that define a strong corporate culture and that can prevent top managers from considering “events that do not fit into their collective mental framework” (Evans and Wurster, 2000, p.4).

Sull (1999) and Youngblood (2000) explain most leading businesses start off with an innovative competitive model that sets them apart from their competitors. This encourages top management to focus its energies and resources on refining and extending the existing business model. Consequently, the creative thinking that brought about the company's initial success is often replaced by a devotion to the status quo. And when changes occur in the business environment, this rigidity brings failure to the company. Sull (1999) terms this as "active inertia" – the inability to take appropriate action. In particular, the following four occur:

- Strategic frames become blinders: Strategic frames are the mind-sets that shape how managers see the business environment. Managers' attention focusing repeatedly only on certain things prevents them from noticing new options and opportunities.
- Processes harden into routines: Once a company has found a way that works particularly well in carrying out a certain activity, it becomes a strong incentive to look in the chosen process and there is no desire to search for alternatives. People in the organization follow the processes not because they are effective or efficient but because they are well known and comfortable.
- Relationships become shackles: Companies need to build and maintain strong relationships with customers, employees, suppliers, investors, and distributors to become successful. However, when conditions in the environment shift, these relationships can hinder companies in developing new products or focusing on new markets.
- Values harden into dogmas: A company's values are the set of deeply held beliefs that unify and inspire its people. As companies mature, however, their values often harden into rigid rules and regulations simply because they are "enshrined in precedent".

Prahalad and Oosterveld (1999) discuss the zone of comfort versus the zone of opportunity. The more successful a firm gets, the more entrenched its managerial routines

become. Moreover, senior executives are usually promoted from within. As a result, all senior managers have strong social ties and may not have the necessary experience for a different approach of managing. Therefore, when discontinuities challenge the established social order within the company, the zone of comfort (the familiar) often wins over the zone of opportunity (the unfamiliar). However, managers should move out from their zone of familiarity to the zone of opportunity by identifying discontinuities, determining their impact on the market, and developing new business models.

According to Hamel (2000, p.121), it is not the information technology, processes, or facilities that distinguish industry revolutionaries from incumbents, but rather, it is their ability to “escape the stranglehold of the familiar.” This is because ultimately the business landscape has considerably changed to assume that industry boundaries and business models could remain the same.

### **3.3.3 The difficulties in cannibalizing oneself**

A new entrant’s biggest competitive advantage is the “unwillingness of the incumbent to fight on a deconstructed definition of the business” (Evans and Wurster, 2000, p.67). Incumbents can easily become inept because of their reluctance to cannibalize their established business model, and this hesitation becomes the greatest competitive advantage for new competitors.

Competing in the new competitive environment requires cannibalizing assets, such as sales and distribution systems, brands and core competencies, and terminating long-term relationships with suppliers and customers. Incumbents hesitate to do this, especially if the existing business has positive margins (Evans and Wurster, 2000). However, when it comes to radical and disruptive innovation, not cannibalizing oneself can mean becoming susceptible to competitors’ attack (Useem, 1999). And as also discussed before, companies have to pre-emptively deconstruct their own businesses to remain competitive. Although this point may be easy to grasp intellectually, it is profoundly difficult in practice for established companies (Evans and Wurster, 2000).

This is paradoxical because for companies to survive and remain competitive in the “new economy”, they have to cannibalize their existing business models and at the same time develop innovative and new business models while still benefiting from the existing ones. Even so, incumbents should allow Schumpeter’s “creative destruction”. It is insufficient to merely try to improve existing business. To really thrive, companies should constantly destroy established businesses while at the same time creating new products and services. The paradox of perfecting (improving, making efficient) products and services only to destroy (cannibalizing, reinventing) them is a challenge for managers (Harari, 1996). Nevertheless, it is important to realize that if incumbents are to defend themselves against competitors, they should play the role of born creator and attacker of their own business models (Useem, 1999).

#### **3.3.4 Unlearning the past**

In established companies, senior executives usually get promoted from within and the organizational pyramid becomes a “hierarchy of experience”. And often changes in the organization do not occur unless it is on the verge of collapsing. However, today the competitive terrain is changing so fast that experience alone has become irrelevant, and the organization has to learn how to compete in this new environment (Hamel, 2000). Managers should put aside old competitive belief and compete according to new rules of doing business. This includes making decisions at a faster speed, acquiring totally new technical and entrepreneurial skills, and managing for maximal opportunity (and not minimum risk) (Evans and Wurster, 2000).

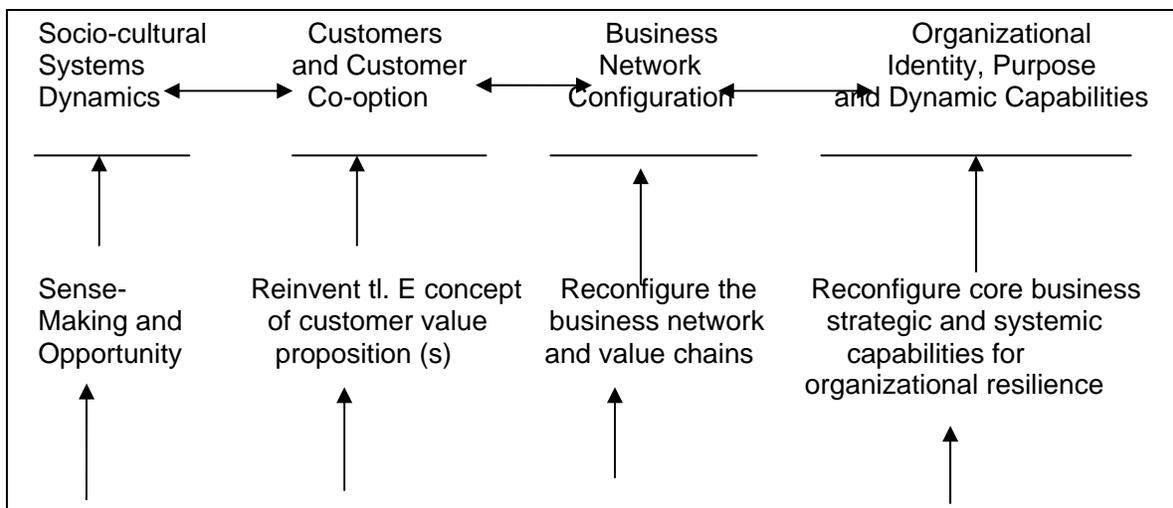
Kieff (2000) maintains that in order to learn, one must “unlearn”. Unlearning is the essential capacity for new learning. Generally, past success becomes a barrier to innovation and future success because the positive reinforcement created by success develops into a strong incentive to repeating past behaviour. Unlearning is also difficult because it means giving up all that the organization has been building up over the years. Moreover, Kieff (2000) explains that if individuals experience difficulty in unlearning, it

is even more difficult to engage groups (organizations) in unlearning their collective norms and collective behaviour. However, firms should persist in the process of unlearning if they are to survive and compete in the rapidly changing business landscape.

### 3.4 New business models and approaches

Andy Grove of Intel has used the term “strategic inflection point” to describe the timing, place, extend of discontinuous change in the industry structure where businesses subtly but discontinuously shift from the old business model to the disruptive new business model, thereby fundamentally changing industry dynamics (Grove, 1996). In most situations, industry inflection points initially emerge too small to be discerned but then overwhelm the industry in such a way that leaves it essentially altered (as evidenced by Encarta and the MP3). This is mostly due to the inter-connectivity and networked nature of the “knowledge economy” and the emergence of critical mass over time. How well a business anticipates and recognizes such a transition, and how soon it adapts to the new rules, determines its future and sustainability.

Figure 9: A systemic perspective of developing new business models



Source: Adapted from Nonaka, I, and Takeuchi, H, (1995), 105.

**Figure 9** indicates that a new business arises not only from reconfiguring an organization's core business strategy and dynamic capabilities, but also from making sense of socio-cultural dynamics and gaps, reinventing of customer value proposition (s), and reconfiguring the business network and its value chains. A reconfigured core business strategy should be the result of systemic insight, foresight and sense making.

As Govindarajan and Gupta (2001) illustrate “competitive advantages is not just a function of how well a company plays by the existing rules of the game. More important, it depends on the firm's ability to radically change those rules. This is true of a newcomer... as it is of an established played” (2001, p.3).

The following subsections present four approaches and techniques in creating new business models put forward by different authors:

- Extended value chain management
- Driver of customer value creation
- Revolutionary thinking approaches
- Complexity management approaches



Although these approaches insist in creating new business models or reinventing existing ones, they will have little significance if they do not offer new customer value proposition. Therefore, offering new customer value is the basis from which viable and successful business models can be created.

### **3.4.1 Extended value chain management**

According to Govindarajan and Gupta (2001) the business model involves the area of customer definition, customer value identification, and value creation process design. Accordingly, there are three arenas in which the rules of the game can be changed into successful rules from the customers' viewpoint (see figure10):

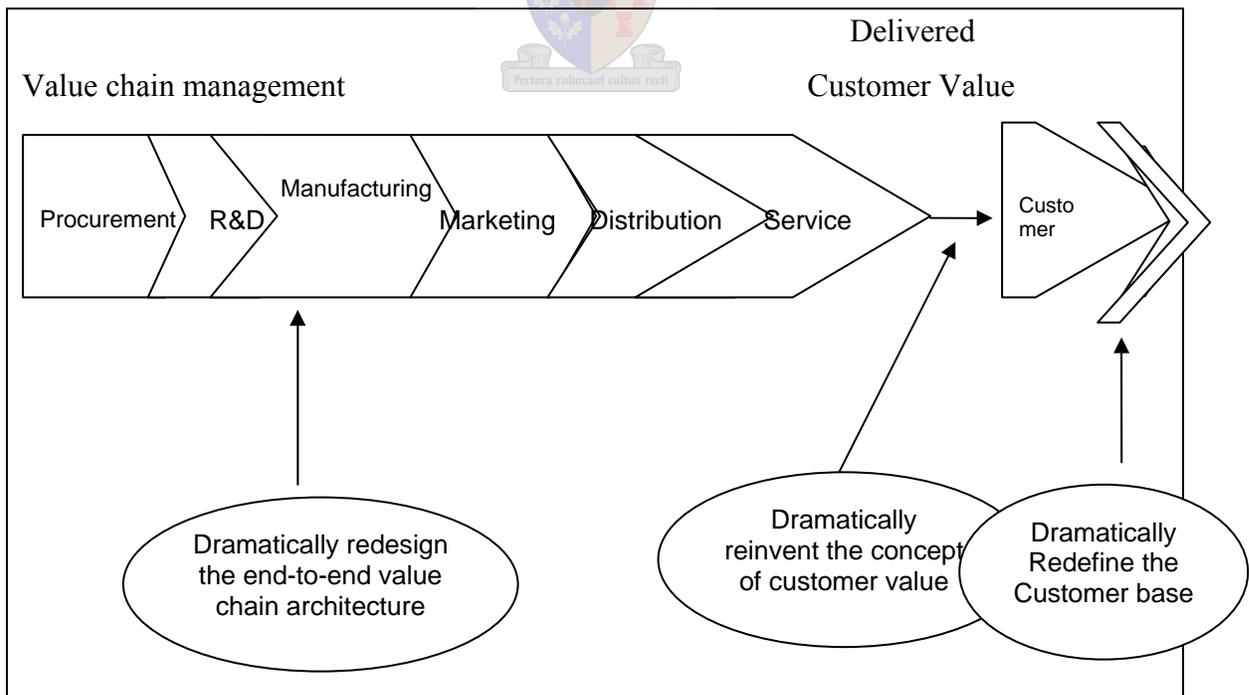
- Dramatic redesign of the end-to-end value chain architecture: make the value chain more effective.
- Dramatic reinvention of the concept of customer value: transforming the value customers receive.
- Dramatic redefinition of the customer base: expanding the market size.

These three arenas are highly interconnected in that changes in any one of them will have implications for the other two, thus, changing the rules of the game.

**a) Redesigning the end-to-end value chain**

A value chain is the linked set of value-creation activities all the way through from basic raw material sources to the ultimate end-product delivered into final customer's hands. Superior value chain architecture is one that, from the customer's point of view, has reduced costs and/or greatly enhanced value.

**Figure 10:** Three arenas for changing the rules of the game

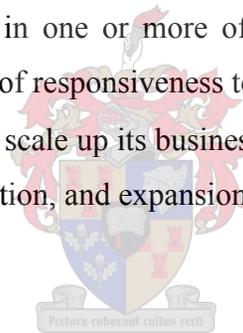


Source: Govindarajan and Gupta (2001). Strategic Innovation: A Conceptual Road Map. Business Horizons, 44(4), 4.

The firm should be able to detect whether the new architecture allows it to target customers much more effectively and efficiently, and whether it has the flexibility to switch to a superior architecture in the future.

There are three principles that should guide the redesigning of the end-to-end value chain architecture. The new value chain should:

- redesign the set of activities that comprise the new value chain and the interfaces across the activities;
- create dramatic gains in one or more of three arenas: cost structure, asset investment, and speed of responsiveness to external changes; and
- enable the company to scale up its business model to ensure growth in market share, switch globalization, and expansion into related products and services.



**Case 2:** Dell – The world’s largest “direct sales” personal computer company

### **How Dell Redesigned the Value Chain**

The traditional value chain in the personal computer industry could be characterized as “build-to-stock”. PC manufacturers designed and built their products with preconfigured options based on market forecasts. The products were first stored in company warehouses and later dispatched to resellers, retailers, and other intermediaries, who typically added a 20 to 30 percent markup before selling to their customers. Manufacturers controlled the upstream part of the value chain, leaving the downstream part for middlemen. Retailers justified their margins by providing several benefits to customers: easily accessed locations; selection across multiple brands; the opportunity to see and test products before

purchasing, and knowledgeable salespeople who could educate customers regarding their choices.

Two trends in the 1980s allowed Dell to radically reengineer the value chain. First, corporate customers were becoming more sophisticated and experienced technology users and no longer required intense personal selling by salespeople. Second, the different components of a PC (monitor, keyboard, software, and so on) became standard modules, permitting mass customization in system configuration.

When Dell developed its “direct” model, it dramatically transformed the value chain architecture by developing from the industry’s historical rules on several fronts:

- It outsourced all components, but performed assembly.
- It eliminated retailers and shipped directly from its factories to end customers.
- It took customized orders for hardware and software over the phone or via the internet.
- It designed an integrated supply chain linking its suppliers closely to its assembly factories and the order-intake system.

Dell created a “virtuous” cycle by rewriting the rules of the PC industry, custom-configuring PCs through direct dealing with end users. Customer intimacy gave Dell superior forecasting ability, which allowed it to pursue JIT manufacturing with very low levels of finished goods and components inventory and little risk of stock-outs. Radical reductions in inventory lowered costs and also enabled Dell to be first to market with the latest products. The net result was that Dell had the dominant share of the PC market, which in turn led to more customers contacts-thereby starting the cycle all over again.

The new value chain architecture also enabled Dell to globalize faster and more profitably than its competitors for two reasons. First, Dell’s direct model yielded the same benefits in non-U.S. markets as it did at home. Second, because of its direct

channel, Dell did not require access to local distribution channels and so faced lower entry barriers into foreign markets.

IBM, Compaq, and Hewlett-Packard probably found it difficult to imitate and neutralize Dell's direct model for fear of alienating their dealers. The bulk of these companies' sales came through third-party dealers. If they set up direct channels, their distributors, retailers, and resellers would be upset at the loss of market share, and the companies could not run the risk of angering their critical constituency.

Source: Govindarajan and Gupta (2001). Strategic Innovation: A Conceptual Road Map. Business Horizons, 44(4), 5-6.

### **b) Reinventing the concept of customer value**

For reinventing the customer value proposition, opportunity lies in shifting from selling discrete products and services to providing a comprehensive customer solution and offering an integrated bundle of products and services to address a generic underlying need. This strengthens the firm's relationships with its customers.

Customers' dependence on the company increases considerably when a company redefines its value proposition from selling discrete products to selling an integrated system of products and services. However, customers generally do not like to rely on a single source because the provider could choose to exploit the resulting bargaining power. Therefore, from the customer's standpoint, offering total solutions will be a successful value proposition if all of the following three conditions are in place:

- The firm is "best-in-class" in every product it offers. Otherwise, customers can obtain that product from another better source.
- The integrated solution is truly superior to the alternative of customers buying discrete products and services and bundling them on their own.
- The firm offers the integrated bundle at a lower price than what customers would pay to assemble the individual products from separate providers. This way, the resulting gains are shared between the firm and its customers.

### c) Redefining the customer base

Redefining the customer base means discovering and serving a previously hidden customer segment large enough to uncover a large customer base. Such redefinition provides the innovator with a large, profitable, and undefended market space and challenges the incumbent in its own market.

An approach of a firm that discovers a hidden customer segment and builds the capabilities to serve it can alter the rules of the game in the following ways:

- The discovery of a new segment dramatically increases the size and growth rate of the overall marketplace, thereby changing the value potential of the industry.
- Solutions designed for the new segment begin to replace the previous solutions of the original segment.
- The capabilities accumulated in the process of discovering and dominating the new segment can be leveraged to overturn established companies.

### 3.4.2 Drivers of customer value creation

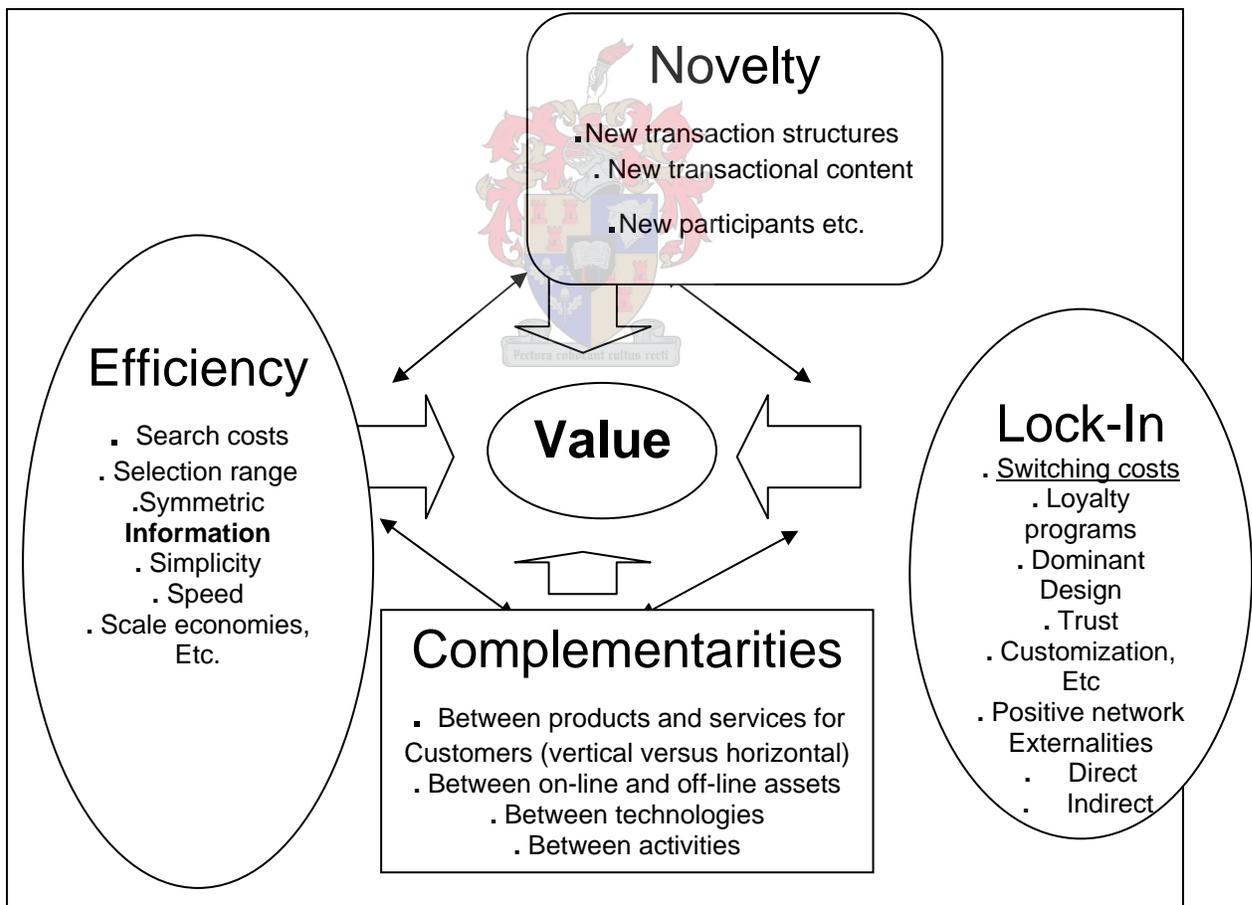
Amid and Zott (2001) propose four sources of value creation in e-business. They define the term “value” as “the total value created in e-business transaction regardless of whether it is the firm, the customer, or any other participant in the transaction who appropriates the value” (2001, p.503). The authors suggest that each of the four major value drivers and the linkages among them enhance the value-creation potential of e-business. The drivers of value creation are (see figure 10):

- Efficiency: by making the purchase made by customers more efficient (e.g. providing information to customers so they can make informed decisions)

- Complementaries: offering complementary services to customers as an integrated bundle of services.
- Lock-in: using strong incentive to obtain repeat business, thereby creating high switching costs.
- Novelty: the service provided is unique and recognized to be pioneering, thus creating previously unrecognized value.

Hitt et al. (2001) point out that these four concepts of value creation are not limited only to e-businesses but to all business operation as well.

**Figure11:** Source of value creation in E-business



Source: Amid and Zott (2001). Value creation in E-business. Strategic Management Journal, 22(6/7), 504.

### **a) Efficiency**

Transaction efficiency is one of the primary value drivers for business. The costs per transaction decreases whenever transaction efficiency increases, hence making the business more valuable.

Efficiency enhancement can be realized in the following ways:

- Reduction information asymmetries between buyers and sellers through supplying up-to-date and comprehensive information. This improved information can reduce customers' search and bargaining costs.
- Enabling faster and more informed decision-making by leveraging inter-connectivity of virtual markets.
- Streamlining the value chain to make it effective and efficient, thereby benefiting both vendors and customers.
- Increasing the number of transitions that flow through the business platform, i.e. scalability.

Therefore, increased information flows and reduced asymmetries of information (with the aid of advanced information technology), among other factors, are important in increasing efficiency and reducing the potential transaction costs.

### **b) Complementarities**

Complementarities are a bundle of goods providing more value than the total value of having each of the good separately. Complementarities increase value by enabling revenue increases.

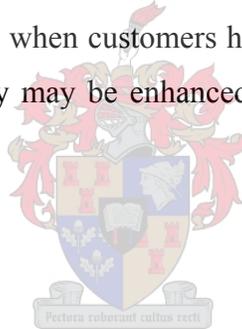
Business can leverage the potential for value creation by offering bundles of complementary products and services to customers. The complementarities are often directly related to a core transaction enabled by the firm, thus the services enhance the value of the firm's core products. But it may also be desirable to offer complementary goods that may not be directly related to the core transactions. Offline assets can

additionally complement online offerings. Customers who buy products over the internet value the possibility of getting after-sales service or returning/exchanging merchandise to “bricks-and-mortar retail” outlets.

Businesses can create value by capitalizing on complementarities among activities thereby uncovering hidden value, such as supply-chain integration and complementarities among technologies.

### **Interdependency between Efficiency and Complementarities**

Efficiency gains made possible by information technology make way for the exploitation of complementarities in business. Bringing together resources and capabilities of distinct firms is economically compelling when transaction costs, and hence the threat of opportunism, are low. Conversely, when customers have access to products and services that are complementary, efficiency may be enhanced through reduced search costs and improved decision-making.



#### **c) Lock-in**

The value creation potential of a business is enhanced by the extent to which customers are motivated to engage in repeat transactions (which tends to increase transaction volumes), and by the extent to which strategic partners have incentives to maintain and improve their associations (which may result in both increased willingness of customers to pay and lower opportunity costs for firms). These value-creating attributes can be achieved through “lock-in”. Lock-in helps in preventing customers and strategic partners from going to competitors, thus creating value.

Customer retention can be enhanced in the following ways:

- Establishing loyalty programs that reward repeat customers with special bonuses.

- Developing dominant design proprietary standards for business processes, products and services.
- Establishing trustful relationships with customers. To the extent that customers develop trust in a company, they are more likely to remain loyal to the business rather than switch to a competitor.
- Opportunities for customization and personalization can be exploited. Businesses can enhance lock-in by enabling customers to customize products, services, or information to their individual needs.
- Firms can use data-mining methods (e.g., submitted customer information and past purchases) to personalize products, information, and services. With such mechanisms the more the customer interacts with the firm, the higher the probability that customers will have the incentive to return to the firm. This creates a positive feedback loop.

### **Interdependency between Efficiency, Complementarities, and Lock-In**

The potential value of a business depends on the combined effects of lock-in, efficiency, and complementarities. Efficiency and complementarities as sources of value creation can be helpful in fostering lock-in. The efficiency features and complementary product and service offerings of a business may serve to attract and retain customers and partners. Conversely, when a business creates lock-in, this can also have positive effects on its efficiency and on the degree to which it provides for complementarities. Moreover, a strong potential for lock-in provides an incentive for prominent partners to contribute complementary products and services because of the promise of high-volume (repeat) business.

#### **d) Novelty**

Businesses can be innovative in the way they do business. This could be done by introducing new ways of conducting and aligning business transactions: create value by connecting previously unconnected parties, eliminating inefficiencies in the buying and

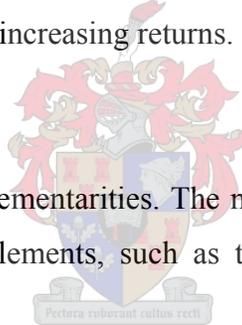
selling processes through adopting innovating transaction methods, capturing latent consumer need, and/or by creating entirely new markets.

There can be substantial first-mover advantages for business innovators. Being the first to market with a novel business method makes it easier to create switching costs by developing brand awareness and reputation. Additionally, innovators can gain by learning and accumulating proprietary knowledge, and by pre-empting scarce resources.

### **Interdependency between Efficiency, Complementarities, Lock-In, and Novelty**

Novelty and lock-in are linked in two important ways. First, innovators have an advantage in attracting and retaining customers, especially in conjunction with a strong brand. Second, being first to market is an essential prerequisite to being successful in markets that are characterized by increasing returns. In “winner-takes-most”, it is crucial to enter a new market first.

Novelty is also linked with complementarities. The main innovation of some businesses resides in their complementary elements, such as the resources and capabilities they combine.



Lastly, in the relationships between novelty and efficiency, certain efficiency features of businesses may be because of novel assets that can be created and exploited in the context of virtual markets.

Each of the identified sources of value creation demands equal consideration, and, as discussed above, the presence of each value driver can enhance the effectiveness of any of the other drivers. Therefore, there is interdependence of the source of value in the value creation for business.

### 3.4.3 Revolutionary Thinking Approaches

According to Hamel (1998) if companies want to succeed in the new economy, they should think about innovation in the following ways:

- move beyond incrementalism to embrace non-linear innovation;
- understand innovation at the level of an entire business system as well as innovation at the level of an individual product or service;
- move beyond a view of innovation as the outcome of “lone visionaries”, and learn how to exploit the innovative ideas of “activities” throughout their organizations;
- develop approaches to innovation that combine diversity of ideas with a coherent viewpoint about the future of the entire enterprise; and
- make innovation a systemic capability.

#### a) Incrementalism Vs Non-linear Innovation

As discussed above, incrementalism is no longer sufficient in a rapidly changing business environment. In nearly every industry today, companies’ strategies are converging and are reaching the end of incrementalism. This is seen in industries where organizations are working harder to improve efficiency and achieving less in competitive differentiation and real wealth creation. Therefore, in a “non-linear world”, only “non-linear strategies” will create new wealth.

Thus, for people in a company to understand the future and to become innovative, top management should encourage the process of experiential learning at all levels of the organization. This means that senior management should ensure that the organization is learning as fast as the changing environment.

### **b) Innovation of the business model**

It is essential that companies shift from a product-centric view of innovation to a systemic view of innovation. That is, companies should be able to think about new models in their entirety as opposed to seeing innovation as a technology or product issue. It is all about a fundamentally different business model.

### **c) Activists not Visionaries**

Companies should rethink their perception that innovation originates with “visionaries” rather than “activists”. There is a long-held belief that change, strategic thinking, and new strategies originate from top management. Essentially, however, most companies are not run by visionaries but by lower level managers and employees who deal directly with the daily business. Therefore, it is important that each person in the company should be able to feel they have a responsibility in contributing to innovation and value creation for the organization.

To help “revolutionary strategies” emerge, companies should involve three constituencies that do not have a large share of voice in the strategy making process: young people or those with youthful perspective; people at the geographic periphery of the organization; and newcomers with experience in other industries and who have not yet had corporate training.

### **d) Innovation as a Systematic Capability**

Innovation is often viewed as the result of a chance happening. But success in the new competitive landscape depends on constant innovation, and consequently it has become imperative to learn how to make innovation a corporate-wide capability.

As pointed out above, non-linear innovation holds a competitive advantage for companies operating in the new economy. Therefore, if the goal of the company is to constantly

create new wealth-generating strategies, then it should incorporate innovation and imagination of all the people in the company in the strategy-making process.

#### **3.4.4 Complexity Management Approaches**

Youngblood (1997; 2000) explains that it is at the “edge of chaos” that living systems are most flexible and have the greatest potential for novelty and creativity. The edge of chaos is when organizations operate far from equilibrium but have not collapsed into chaos. Here they creatively ‘self-organization” into higher levels of order that are both more complex and more stable. This “bounded instability” provides clear boundaries (vision, objectives, and guiding principles) that gives the company shape and direction, but within those boundaries there is freedom to act quickly and responsively in the company’s best interest.

Leaders can create an environment where the organization can renew itself as needed in order to achieve the strategic vision. The role of leaders, then, shifts to activities that promote an environment where self- organization can occur.

Youngblood (1997) offers three broad categories of activities for which the “new leader” is mainly responsible: establishing context, disturbing the system, and cultivating the organization.

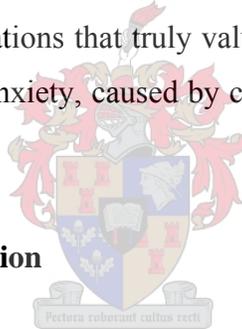
##### **a) Establishing Context**

Creativity and self-organization in living systems are dependent on having a clear identity. In organization, this identity is established through a shared vision of purpose, principles, strategy, and culture. A strong, well-understood, core ideology is vital, because it is through shared beliefs and intentions that people are able to act autonomously and remain in harmony with the whole – thus significantly reducing the need for external controls.

Responsibilities for the new leaders in this regard are: clarifying a shared vision and connecting the people in the organization to it through active participation and extensive dialogue; developing organizational alignment around a collectively shared purpose, strategy, and guiding principles; and assisting the organization in understanding and interpreting information and events in the context of the organization's shared vision.

### **b) Disturbing the System**

Living system has the most vitality and creativity when they are experiencing disturbance. Therefore, instead of creating stability, the new leader ensures that the organization is sufficiently “de-stabilized”. Some of the actions that new leaders take are: creating compelling goals that are audacious and inspiring; helping the organization obtain accurate and useful information and feedback from the ecosystem in which they are operating; developing organizations that truly value, rather than, different viewpoint; and helping employees use their anxiety, caused by change and disturbance, to stimulate their creativity.



### **c) Cultivating the Organization**

Creativity and self-organization in living systems are contingent on having a clear identity, a high degree of autonomy among the systems agents, and openness (the free flow of information, interactions between agents, and diverse viewpoint). The new leaders should understand that the organization does not need to be controlled, but that it will generate its own order and respond creatively to the environment once these conditions are met.

The new leader's responsibility in assisting the organization in creating these conditions is: attempt to create the conditions where people can feel ownership for both their work and their company; actively promote collaboration, cooperation, and mutual enrichment; promote the diffusion of learning within the company and encourage diverse ideas and

viewpoint; and seek ways to channel employees' vitality and creativity into positive and productive directions.

“Leadership” is not a position, nor something that is limited to certain people. It is a process in which every person in the organization participates. In such organizations, the goal is to hand over decision-making authority and power to individual employees. This will enable them to operate independently and creatively.

### **3.5 An Overview of New Business Models Approaches and Techniques**

The approaches for creating new business models discussed in the previous section are not meant to be exhaustive. However, they assist in creating an understanding and awareness of how companies can become adept in constantly reinventing their business models.

Both the Extended Value Chain Management (Govindarajan and Gupta, 2001) and Drivers of Customer Value Creation (Amit and Zott, 2001) place emphasis on creating value for customers in their approaches in developing new business models. This is the starting point they use from which competitive and successful business models can be created. These two approaches provide guidelines for companies in designing efficient and effective value chain architecture, increasing customer value by offering a comprehensive and integrated bundle of products and services, striving to be imaginative and innovative in finding new and unique ways of doing business, and locking-in a substantial share of the market. Accomplishing these will increase customer value proposition, and this in turn intensifies the firm's ability to reinvent itself and to change the rules of the game in its industry.

Revolutionary Thinking Approaches (Hamel, 1998) and Complexity Management Approaches (Youngblood, 1997) are techniques that encourage organizations to establish a setting where new business models can take place. These include, firstly, making innovation an outcome of a company-wide capability that combines a diverse and cohesive set of ideas and viewpoints from people throughout the organization. And

secondly, creating an environment where the organization can self-organize and remain competitive by establishing a shared vision/identity, creating disorder that motivates creativity, and encouraging learning and promoting risk-taking.

In reviewing the above approaches in creating new business models, it is evident that Govindarajan and Gupta (2001) and Amit and Zott's (2001) approaches provide particular frameworks and dimensions for reinventing new business models. Hamel (1998) and Youngblood's (1997) approaches, on the other hand, provide ways for constructing a suitable environment or thinking that enable new business models to arise.

### **3.6 Summary**

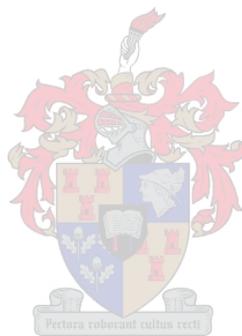
The need for innovation and creativity has become stronger in a competitive landscape where business models have shorter life cycles. Yet there is reluctance and hesitation in established organizations to let go of traditional ways of doing their business. Incumbents tend to follow established patterns of thinking and working despite dramatic environmental changes. However, it is critical for companies to acknowledge that the way to survive and thrive in this “new economy” is through unorthodox and unconventional methods.

This chapter discusses the obstacles established firms face by resisting changes. The traditional ways of doing business and the limited perspectives of top management lead companies to falter in an era where constantly creating new business models is essential to becoming successful in a rapidly changing business environment.

A number of established approaches have been published on how companies and individuals can be creative and innovative, and this chapter has discussed some of the methods put forward by different authors in developing new business models, namely, Govindarajan and Gupta's (2001) approach to exploring the opportunities for changing the rules, Amit and Zott's (2001) four drivers for value creation, Hamel's (1998)

“revolutionary thinking” about innovation, and Youngblood’s (1997) approach to complexity management.

While these approaches are not meant to be comprehensive, they provide the frameworks and guidelines for creating new business models and the techniques for developing an environment conducive to innovation and imaginativeness.



## CHAPTER 4

### THE IMPACTS OF THE TURBULENCE AND UNCERTAINTY IN THE BUSINESS ENVIRONMENT OF THE “NEW ECONOMY”

#### 4.1 Introduction

With the increasing turbulence and complexity of the business environment in the 21st century, organizations have to be able to manage rapid change within industry landscapes. Additionally, it is necessary to develop new strategic thinking that guides and assesses organizational capabilities – both adaptive and proactive – in order to achieve such change. Moreover, strategists should look across time to not only foresee environmental trends, but also to better participate in shaping them (Kim and Mauborgne, 1999). Traditional views of the industry value chain, which advocate strategies that enable firms to achieve efficient and effective positions in that value chain, often force organizations to disregard strategic opportunities that can be attained by re-inventing and changing the configuration of the overall value-creating system. Different from traditional industries, most developing processes of emerging industry encounter the following features: high technological uncertainty, lack of industry standards, high involvement of start-up companies and spin-offs, first time buyers with diversified demands, and government intervention (Kauffman and MacReady, 1995).

The resulting new economic environment is one that challenges the essence of the business models firms use to achieve their various goals. This chapter discusses the turbulence environment, the uncertainty and the driving forces behind the change occurring in the competitive environment, the “new economy” and its implications, and the relevant of these for organizations to use strategically the innovation of business models in this new economy.

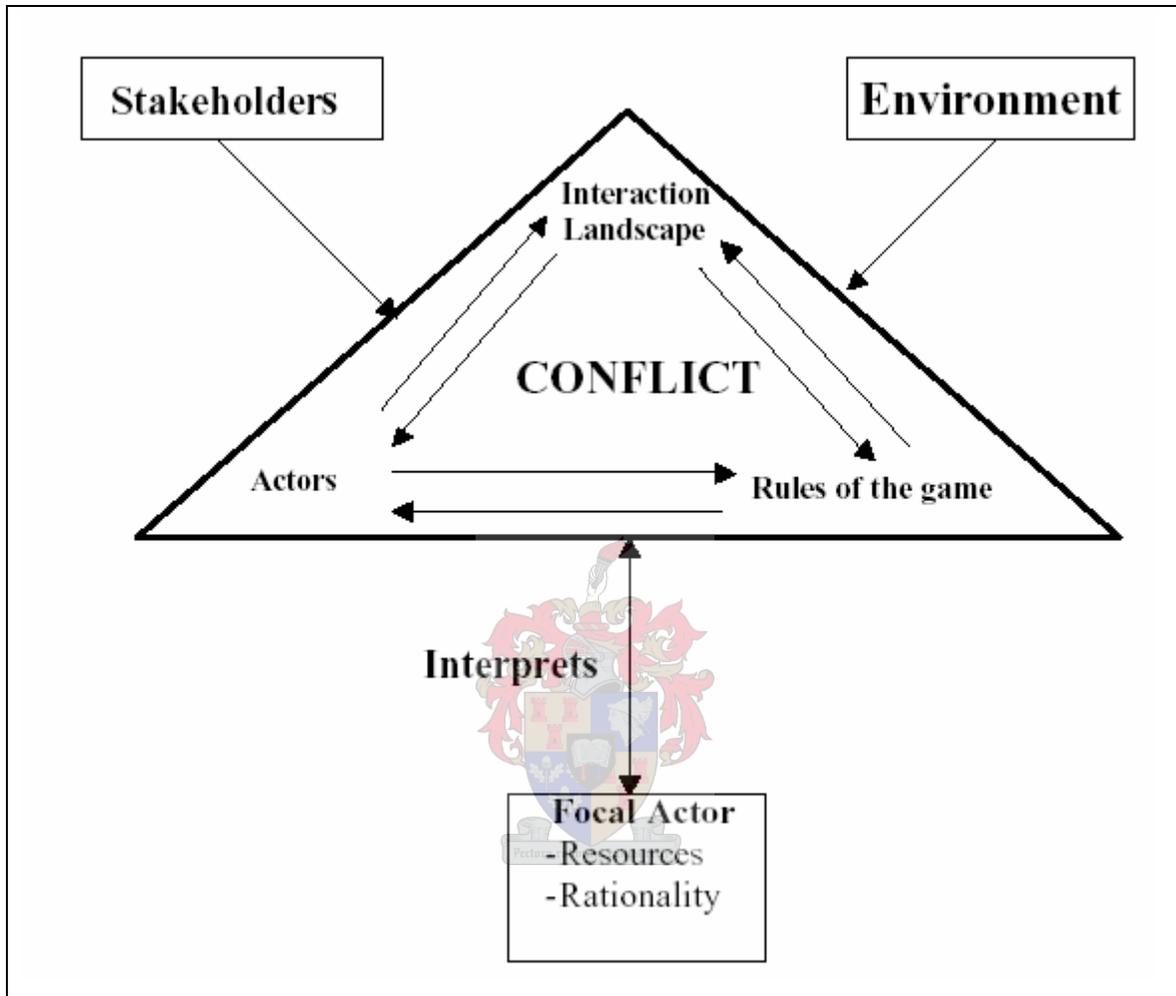
## 4.2 Strategy in Turbulent Environments.

Turbulent environments are characterized by their high level of dynamism (showing nonlinear positive feedback), complexity and uncertainty (Crossan, Nanjad and Vera, 2001). Reasons behind this increasing turbulence are associated to many factors. First, technological convergence and the consequential fall in the barriers to entry of industries related with communications and information (Chackravathy, 1997). Second, the increasing access and availability of information and the need to manage that information in a more effective way (D'Aveni, 1994). Third, the increasingly global profile of competitors (D'Aveni, 1994) and finally the existence of new global public sector trends, characterized by the downsizing of government in many countries, after its massive retreat in its roles of shareholder in different sectors of the economy and by the significant increase in social and environmental activism, resulting in major new legislation aimed at improving life quality of citizens, but often at a significant cost to industry (Bailey, 1997).

Turbulence is a consequence of the difficulty many industries are facing to achieve a congruent vision of the external conflict they are dealing with as its building blocks, actors, landscapes and rules of behavior are suffering strong transformations. This situation makes very hard for actors to build stable expectations about each other's behavior or, in (Porter's, 1980) words, to identify their "response profiles".

For analytical purposes, changes will be discussing in the three building blocks of conflict individually, but as it can be easily observed, changes in the three dimensions tend to be interrelated and have mutual causality as shown in Figure 12.

Figure 12: Structure of conflict



Source: Prahalad (2001), 123.

#### ***4.2.1 Changes in actors.***

Technology and deregulation make market boundaries of many industries become more blurred, allow new business models to appear, and new competitors to bump, breaking the “dominant logic” (Prahalad and Bettis, 1986) of many industries and challenging the standard practices. Players coming from diverse backgrounds, with different business logics, and with no history of competitive interaction, are more likely to clash, leading to an increase in rivalry (Porter, 1980; Day, 1997) or, in our words, in the intensity of the

conflict. Many knowledge based industries show increasing returns to scale, a pattern that increases instability (Arthur, 1999), as competitors engage in “winner takes it all” type battles of extreme hostility, trying to develop “network externalities” (Shapiro, Varian, 1999) that bend the battle definitely in their favor. Additionally, M& As and alliances multiply, as actors give up their independence in exchange for the prospect of being a part of a more powerful coalition in a (usually) wider sphere. This situation changes the interdependencies between the interests, creating new coalitions and widens the interaction sphere. Similarly, (Pfeffer and Salancik, 1978) highlighted that mergers take place with the purpose of reducing the dependence from outside, making their environments more stable. In short, higher complexity in the interdependence between the actors and the lower familiarity among each other, make more difficult the possibility of coordinating action around congruent visions or focal points (Schelling, 1960) around which the conflict could converge in a mutually acceptable way. Our idea of congruent vision corresponds to Game Theory’s concept of Nash equilibrium.

#### **4.3. *Changes in the interaction landscape.***

During the last two decades, many industrial sectors increased their degree of internationalization or, directly became global sectors (Porter, 1980; Bartlett and Ghoshal, 1987; Yip, 1989) significantly affecting the scope of markets included in the interaction landscape. Moreover, this situation leads to an increase in the number and different profiles of actors and to a big shift in the network of interests at stake, creating new interactions that alter the coalitions. Additionally, traditional industry barriers simply disappeared in industries related to information and communication (Chakravarthy, 1997). Many of these knowledge -based industries show increasing returns to scale, a pattern that increases instability (Arthur, 1999). In an environment in which business definitions are often in flux, determining the arena of competition becomes a key and nontrivial challenge (Day, 1997).

In this situation, differences in perceptions of the different actors increase, leading to strategic moves subjectively rational, as they respond to each actor’s structure of

objectives, but collectively irrational, because they increase the intensity of conflict making many actors assume serious risks of facing an unacceptable escalation.

#### ***4.4. Changes in rules of the game.***

Formal rules (laws, specific regulatory frameworks, etc.) have suffered strong modifications thanks to the changing role of the State in many countries, characterized by a massive retreat in its role as shareholder in industries as utilities, banking, telecommunications and airlines in many European, Latin American and Asian countries (Bailey, 1997). This trend has been reinforced by an increasing deregulation of the private economic activity.

The second trend, somewhat contrary to the first, has been the significant increase in social and environmental activism, resulting in major new legislation aimed at improving life quality of citizens, but often at a significant cost to industry (Bailey, 1997).

Informal rules, resulting from interaction between the actors, have also been modified as a consequence of the abovementioned changes at the level of actors and interaction spheres. Companies try to influence public policy in order to control interdependence (Pfeffer and Salancik, 1978).

Besides, changes in rules generate changes in the interaction spheres and actors, due to the impact of deregulation and privatization on the frontiers of the industrial sectors and on the set of interdependent interests.

#### **4.5. Environmental turbulence is contingent.**

Is this Tower of Babel of strategic interactions a new natural state of the business environments or it is simply a temporary outcome resulting from the emergence of the society of information? (D'Aveni, 1994), for instance, states that “hyper competition” is here to stay as a desirable scale in the inevitable descent towards perfect competence. (Chackravathy, 1997), instead, affirms that turbulence and hyper competition are not the

same and that in industries operating in turbulent environments there exist multiple and unpredictable equilibrium points.

Our model conceives turbulence as a phenomenon derived from the impossibility of actors to make their moves converge towards sensible focal points, as a result of the sharp changes affecting the three building blocks of conflict. For that reason, it is necessary to say that there is no reason to believe that turbulence is a new state of nature, as it should mean to believe that actors will never be able to reach sensible focal points through communication. This should only happen if the speed of change were permanently higher to the speed of actors to agree congruent visions. A history of continuous interaction between actors may promote stability, easing to build expectations about competitors Potential reactions (Porter, 1980) and, therefore, ease the road towards sensible focal points.

#### **4.6. Uncertainty in entrepreneurship**

Uncertainty is a concept that is central to entrepreneurship, as emphasized by eminent economists such as Cantillon, Mangoldt, Knight and Keynes (Hebert & Link, 1989; Ekelund & Hebert, 1990). It can be argued that without uncertainty, entrepreneurship would be unnecessary. The East European socialist commando economies have shown this. Here, one aimed at a system of complete planning that would result in optimal resource allocation. However, since uncertainty is a fact of economic life entrepreneurs are needed to arbitrage, to take risks and to innovate (van Dijk & Thurik, 1998). Entrepreneurs are considered to be the primary agents dealing with uncertainty in the economy. Entrepreneurs are called for in the fast changing economic reality of today's society (Audretsch & Thurik, 1997 and 2000; Wennekers & Thurik, 1999; Carree, van Stel, Thurik and Wennekers, 2000; Audretsch, Carree, Van Stel & Thurik, 2000).

Uncertainties: Uncertainty is an unavoidable aspect of entrepreneurship and yet is essential to the existence of future opportunities (McGrath, 1996). The root cause of entrepreneurship-based uncertainty stems both from a lack of knowledge, and a lack of

clarity/definition about goals and objectives, vagueness in the definition of functions, etc. This is especially acute in the earlier phases since no “roadmap” exists to build

Given the importance of uncertainty, it is striking that in neoclassical economics the role of entrepreneurship is limited to the entry that follows profit opportunities (Carree & Thurik, 1995). Neoclassical economics suggests that there are a set of possible outcomes and a set of probabilities that each of these outcomes will actually occur (Varian, 1992). Then, a distinction is made between risk and uncertainty. The distribution of probabilities says something about the amount of risk. If the probabilities are not known, the term true uncertainty is used. In neoclassical economics, the probabilities are usually assumed to be known. With regard to entrepreneurship and entry, the profit opportunities are supposed to be known and accessible to everybody. Therefore, pure uncertainty is commonly disregarded (Choi, 1993; Wubben, 1993). Economists like Knight and Keynes and economic schools like the Austrians and the Post-Keynesians have given uncertainty more emphasis (Wubben, 1993). They define uncertainty in similar terms, but state that “especially entrepreneurs do not know the full range of outcomes or their possibilities of occurring” (Lachmann, 1993; Wubben, 1993). In particular, this might be true for start-up entrepreneurs (Bhide, 1994). The new business founders often can not calculate their future profits in advance. For example, someone who plans a new McDonald’s outlet might have a fair estimate of the degree to which this outlet will be a success, due to experiences with all previous outlets. For new business starters this does not hold.

#### **4.6.1 Proposed forms of uncertainty and their relationships with performance**

The uncertainty encountered by the entrepreneur can be conceptualized on the industry level, the firm level, and the personal level. On the industry level there are forms of uncertainty the small scale starter usually can not influence and just has to deal with. First, there is uncertainty as caused by change and EIM Business & Policy Research the unpredictability of the economic environment (Miller & Friesen, 1982).

Change can be the result of developments in technology, consumer preferences, behavior of competitors, etc. In this sense, uncertainty is related to the passage of time (Choi, 1993). Second, man's processing capabilities are limited (Simon, 1956; Kahneman, 1973). Practically, it is not possible to calculate all probable outcomes and their probabilities of occurring. Therefore, entrepreneurs reduce complexity by filtering the information they receive. Complexity refers to the diversity of environmental elements an entrepreneur has to deal with, as well as to the sophistication of knowledge and information required (Vaessen, 1993). Third, there is the uncertainty caused by striving with competitors for limited resources. This form is linked up with the construct of munificence (Castrogiovanni, 1991), which refers to the availability of resources relative to the amount of competition.

On the firm level, there is the uncertainty of the entrepreneur about whether his firm will succeed or fail. This is how entrepreneurs commonly understand uncertainty. As with any firm, the start-up firm will try to make success as likely as possible. Efforts to do so concern the control of resources, resulting in a smaller amount of resource uncertainty. Unfaithful customers, unreliable suppliers, lack of finance, opportunistic employees are all examples of resource uncertainty. On the personal level, uncertainty about success or failure can be caused by uncertainty of the entrepreneur about his own entrepreneurial capacities (Jovanovic, 1982). Issues of self-efficacy have been well researched by (Bandura, 1977). Finally, uncertainty can be regarded at the information and knowledge level. This last form of uncertainty, information uncertainty, can be regarded as a 'meta' category of uncertainty, as all other forms of uncertainty will influence the level of information uncertainty.

(Milleken, 1987) discerns three forms of uncertainty relating to knowledge. She calls uncertainty about what is currently happening state uncertainty. Uncertainty about the impact of environmental changes on one's firm is called effect uncertainty. Uncertainty about what response options there are and what their impact will be is called response uncertainty. Summarized, this sixth form of uncertainty can be called knowledge uncertainty as it is concerned with a lack of (confidence in) information and knowledge

about the economic environment and a lack of knowledge about cause-effect relationships in that environment (Milleken, 1987; Gerloff, Muir & Bodensteiner, 1991; Buchko, 1994).

Form of uncertainty related to level of analysis level of uncertainty form of uncertainty (all are forms of information uncertainty) individual self confidence firm resource uncertainty industry change, complexity, munificence EIM Business & Policy Research The forms of uncertainty will be differentially related with firm performance. On the one hand resource uncertainty and a non-munificent environment can be expected to have a negative effect on firm performance. Resource uncertainty approximates being a success measure, as it reflects directly the hold a firm has on resources, and firms can be expected to perform worse in an environment with many competitors relative to limited profit and investment opportunities. Changing or complex markets on the other hand should not be more or less profitable than average, a priori. Knowledge uncertainty will be influenced by change and complexity on the one hand and by performance on the other, as performance gives feedback on the value of the knowledge one has (Miner, Smith and Bracker, 1989).

#### **4.6.2. Relating forms of uncertainty to psychological strategies**

How do entrepreneurs react to uncertainty? According to Shackle, uncertainty is a fertile ground for creativity and imagination (Wubben, 1993). Knight proposes that intuition and imagination will supplement the incomplete information one has. On the other hand, Keynes wrote that when feeling uncertain, entrepreneurs are in an “intermediate domain where one follows conventions, customs and rules of thumb” (Wubben, 1993).

Hence, uncertainty can lead to habitual and conventional behavior but also to creative and unconventional behavior. This is reflected also in the unequivocal empirical results in this area. For example, (Matthews and Scott, 1995) found less planning in an uncertain environment, while (Shrader, Mulford and Blackburn, 1989) found the opposite.

In relating psychological strategies to forms of uncertainty we limit ourselves to forms of uncertainty on the industry level. These are the dimensions of the environment (Dess & Beard, 1984; Vaessen, 1993) independent of the behavior of the entrepreneur: change, complexity and munificence. Knowledge uncertainty and resource uncertainty are influenced by performance and therefore by the activities of the entrepreneur. Relating psychological strategies to forms of uncertainty dependent on the entrepreneur would introduce a tautology. In developing our hypotheses we would like to build on the conflicting results mentioned in the previous paragraph, which might be due to disregarding that there are different forms of uncertainty. We propose that a Complete Planning Strategy is a reasonable approach to deal with complexity, but not with change for which an Opportunistic Strategy is more suitable.

Concerning a lack of munificence, we assume that it is connected to a Reactive Strategy, as it is more difficult under adverse circumstances to remain proactive and goal-oriented. This leads to the following hypotheses:

Hypothesis 3: Complexity of the environment will lead to increased use of the Complete Planning Strategy; changeability of the environment will lead to less frequent use of the Complete Planning Strategy.

Hypothesis 4: Changeability of the environment will lead to the increased use of the Opportunistic Strategy; complexity of the environment will lead to less frequent of the Opportunistic Strategy.

Hypothesis 5: A lack of munificence in the environment will lead to more use of the Reactive Strategy.

No hypothesis is developed with regard to Critical Point Strategy and Habit.

#### **4.7. The main characteristics of the “new economy”**

The new economy phenomenon has been variously referred to as, the weightless economy, the knowledge economy, the digital economy, the electronic economy, the virtual economy or network economy, and several other titles besides. A review of all the

different meanings attached to the term brings us to define the new economy as one based on knowledge and information, relying on sub sectors such as purely digital goods and services, mixed goods (that is, physical goods that are sold through the Internet) and the ICT industry which provides the support for the afore-mentioned segments.

Viewing it from a broader perspective, it might interpret the new economy not only as a phenomenon arising from the impact of ICT at microeconomic level, but also as a consequence of the effects of technological innovation in macroeconomic terms (improvements in productivity, lower inflation, structural changes in the productive sector and in employment, the new role of government, etc.) all this in an international setting shaped by globalization.

#### **4.7.1. ICT: the infrastructure of the New Economy**

ICT have spread rapidly, both in the economy and in society in general, partly because they have completely transformed ways of accessing, processing and storing information. These technologies are therefore present in all aspects of human activity, making it possible to set up endless links between different areas, activities and agents.

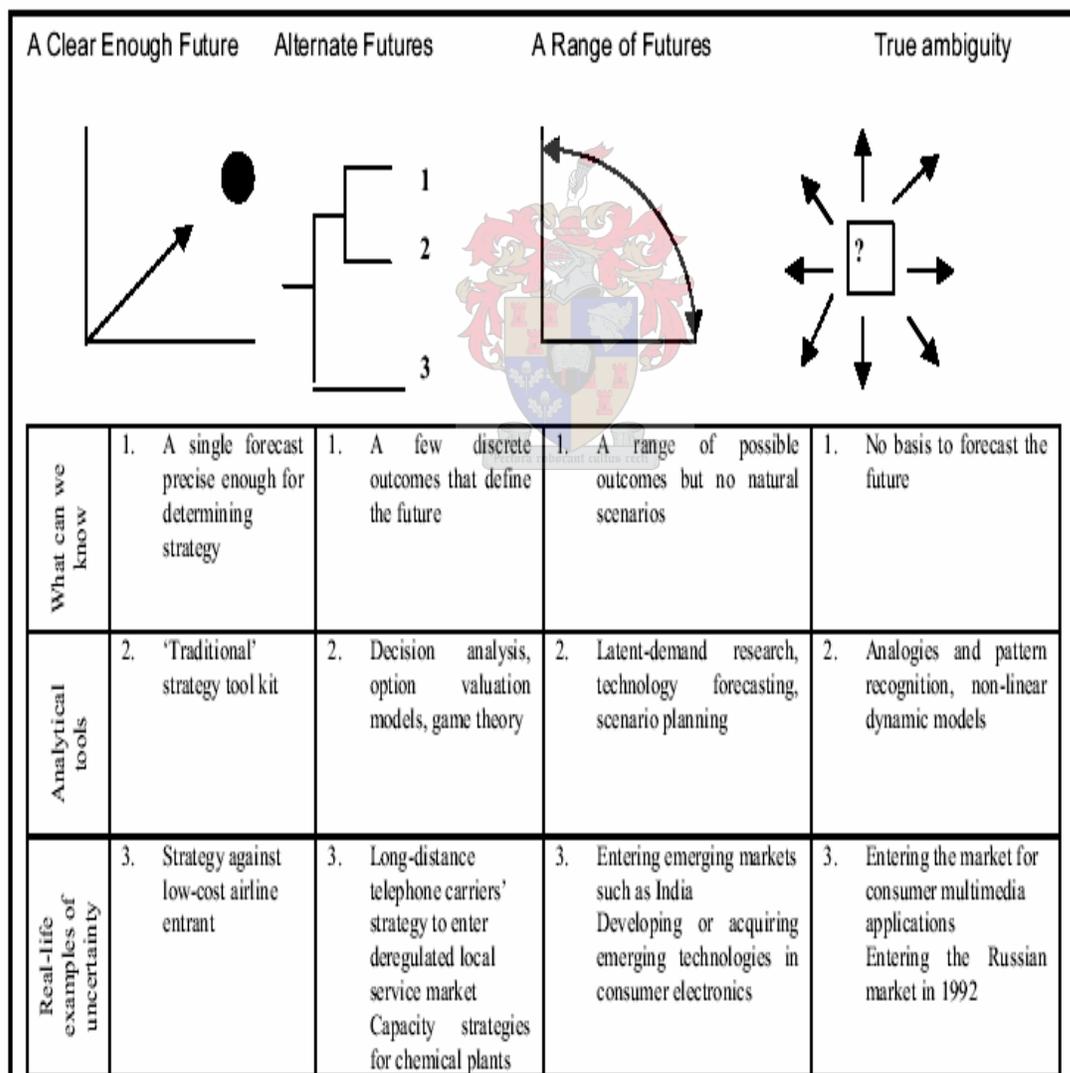
These changes have favoured the emergence of the so-called information technology paradigm (Castells, 1997) which features characteristics that favor the development of an interconnected, interdependent economy, with a network structure. Its tremendous flexibility and capacity for transformation permit the increasing convergence of specific technologies into a highly integrated system.

The support for this new paradigm is the Internet. This is chiefly a result of its two main characteristics: the first of these being that the computers in its network are dispersed and the contribution of the IT industry in the period 1995-2000 amounted to roughly one third of the total economic growth of the USA, while also playing a role in increasing demand, controlling inflation and transforming the labour market. Second that it is an open network. The former means that, unlike in the traditional, centralized model, computers

connected via the Internet are able to perform multiple functions. Each computer can function simultaneously as a customer or a supplier of content and/or services.

The fact that the Internet is an open web means that it is based on open standards that allow any computer on the net to connect, through the same protocols. This permits the interaction of different computer platforms and simplifies the exchange of information, multiplying the possibilities of links between the different agents operating in the electronic marketplace.

Figure 13: Four notions of uncertainty theorized by Courtney, H., J. Kirkland and P. Viguerie, December 1997.



Source: Courtney, H., J. Kirkland and P. Viguerie (1997), 88.

#### **4.8. Levels of uncertainty (see figure 13)**

Courtney et al. (1997) have developed a framework to classify the levels of uncertainties in four levels according to the magnitude of change. They maintain that the traditional approaches are useful for generating strategies for businesses facing low levels of uncertainty, and alternative approaches should be applied according to the various levels of uncertainty in uncertain environments. What seems relevant to the study is the highest level in the hierarchy of the uncertainty, level 4 or true ambiguity.

- **Level 1: A clear-enough future**

The future is precise enough to develop a strategy based on analysis. It is recommended that traditional models can be utilized for generating strategies for businesses facing low levels of uncertainty.

- **Level 2: Alternative futures**

The future can be described as one of a few alternative outcomes, or discrete scenarios. Decision analysis, option valuation models and the game theory may be used to identify the different possible future outcomes and to consider the likely paths the industry might take to reach those alternative futures.

- **Level 3: A range of futures**

At this level, a range of potential futures can be identified. That range is defined by a limited number of key variables, but the actual outcome may lie anywhere along a continuum. Courtney et al. (1997) suggest that a set of latent demand research, technology forecasting and scenario planning could be used to predict relevant scenarios that describe alternative future outcomes, and analysis should focus on the trigger events signaling that the market is moving toward one general direction or another scenario.

- **Level 4: True ambiguity**

At level 4, multiple dimensions of uncertainty interact to create an environment that is virtually impossible to predict. Not only scenarios within the range, but the whole range of potential outcomes cannot be identified. It might not even be possible to identify, much less predict, all the relevant variables that will define the future.

What is relevant to the study is level four or true ambiguity. Courtney et al. (1997) have made it clear that at this level traditional strategic management approaches are inappropriate.

#### **4.9. The view of learning school on traditional strategy models**

The collective viewpoint of evolutionary theorists (Mintzberg, 1994; Campbell & Alexander, 1997; Huffman, 2001) which is commonly referred to as the learning paradigm views strategy as an emergent, a process of ongoing learning and analysis, in contrast to conducting analysis at a given time to identify content of sources of competitive advantage. Contrary to the views of Courtney et al. (1997), who maintain that the rate of change determines the relevance of traditional approaches, the learning school contends that the issue of concern is not change per se, but that the traditional approaches have fundamental flaws inherent in their concepts, and therefore, have since their foundation never worked out the way it was claimed. According to this group's viewpoint, the fallacies of traditional models are highlighted regarding several fundamental concepts, including prediction, vision, content analysis, detachment of top managers, and sequential steps of strategy formulation and implementation.

##### **4.9.1 From prediction to on-going learning**

The basis underlying assumption of the traditional models is that a combination of analysis and rationality can lead to reliable predictions regarding the future. Porter (1996) emphasizes that strategic positioning should consider a perspective of "...a decade and

longer horizon... (p.69).” Mintzberg (1994) rejects this, stating that in view of strategic planning models, “...the world is supposed to hold motionless when the plan is being developed and that it stays on the predicted course while that plan is being implemented ... (p.109).”

It seems that that the rapidity with which the business environment had changed made it clear that prediction is very difficult. Accepting this reality seems to shift the focus of strategic planning from an attempt to predict the future to flexible and speedy responses to a changing present, from a plan based on analysis and reason to a design of experiments to provide a basis for ongoing learning and adaptation (Camillus, 1997).

#### **4.9.2. The fallacies in vision**

The traditional mindset assumes that the objective for any business is to make profits. Porter (2001) states that “... the creation of economic value once again becomes the final arbiter of business success ... and over the long run; shareholder value is a reliable measure of economic value (p.65).”

Campbell and Alexander (1997) challenge porter’s assertion, stating that creating value for shareholders is not much of an objective, as it is an economic constraint on a company’s actions, and, thus, to describe the competitive advantage or shareholders’ value as an objective that drives strategic thinking, is to misunderstand the universal constraints. In supporting to this argument, Mintzberg (1994) says that “... strategic planning is the source of such confusion causing managers to confuse real vision with the manipulation of numbers ... (p.110).”

Campbell and Alexander (1997) argue that visions that describe the essence of why the organizations exists, are the basis for generating strategy, and hold that when a vision is more focused and detailed, it is likely to enable a company to develop a winning strategy. Similarly, Mintzberg (1994) believes that business founders’ vision, such as a dream about inventing a new product drives strategic thinking. According to this group, this

kind of purpose limits the range of strategic choices that need evaluating and therefore helps to simplify strategy development.

### **4.9.3 The simultaneous nature of formulation and implementation**

In the traditional process, planning development follows sequentially, with mission being first, then objective, followed by strategy and lastly tactics (generally known as MOST). Traditional approaches drive strategies from objectives, formalizing those strategies so that they can be implemented step by step, and articulating the anticipated consequences or results of each step. In general, traditional approaches view the strategy formulation process as deliberate and deductive.

The learning school criticizes the formal strategy formulation process, arguing that objectives and strategy, as well as formulation and implementation are intertwined in a way that makes it difficult for an organization to decide where to start. It is argued that, in reality, when developing objectives, the idea of how to achieve them, comes instantaneously. And if management cannot think of a sound strategy, it is likely to reject the objective as unrealistic. Tactics and strategy have the same sequencing problem. The tactics need to be worked out before the strategy can be determined, and the strategy needs to be clear in order to define the objectives. The most framework, therefore, collapses from a sequential path into a simultaneous coming together of all the elements. This argument implies that one should know all the processes and insights when developing a strategy. Narrowing this implication, however, Campbell and Alexander (1997) and Huffman (2001) argue that the most fundamental thing in developing a strategy is to understand the tactical details that provide the insights for a winning strategy and which give leaders the courage to set bold objectives. In effect, the learning paradigm emphasizes a bottom-up strategy formulation, in contrast to the traditional mindset of a top-down strategy formulation.

#### **4.9.4 The exclusion of lower level managers**

In the traditional mindset, leaders are expected to select a winning strategy, to develop a detailed operating plan, and to direct the activities of subordinates in the realization of the strategy. Supporting this mindset, Porter (1996) avows that lower level employees who are immersed in the technical details but who are encouraged to search for every means of competitive advantage, are not capable of having strategic thinking.

On the other hand, leaders simply do not have the information, expertise, or time to make detailed strategic decisions, to draft plans for implementing their decisions, and to monitor full compliance with plans. There is a general opinion that operating managers who have good insight but who do not have a say in managing the company, may be excluded from the strategy-making process (Mintzberg, 1994; Campbell & Alexander, 1997). Huffman (2001) observes that "... brilliant strategy comes either as part of an evolutionary process or as the product of an unknown or apparently unknown process inside the head of the experienced manager but with the least power to promote them successfully... (p.14)."

It is true that hierarchical structures discourage effective communication in the organization, resulting in time delays, eroding richness in contents of message and excluding the qualitative information. However, the proponents of the learning paradigm (Mintzberg, 1994; Campbell & Alexander, 1997; Huffman, 2001) seem to make no attempt to study how the hierarchical structure might be restructured to enable learning to take place on an ongoing basis.

#### **4.10. Driving forces in the new economy**

In the new economy abundance, the law of increasing return, network economies of scale and acceptance of open standards are major characteristics of forces driving the new economy (Tapscott, et. al., 2000).

#### **4.10.1 From economies of scale to abundance**

In the knowledge economy, many offerings are becoming physically less intensive and more knowledge-based. Once companies invested in the establishment of a plant, they can reproduce and distribute knowledge-based products, like software and electronic entertainment, for near zero marginal cost. Also, the price of knowledge intensive physical goods becomes much cheaper.

The use of satellite imaging, intelligent robots and state-of-the-art factories quickens production and slashes operation costs substantially. Consequently the economy shifts from economies of scale to abundance.

#### **4.10.2 The law of increasing returns**

Many knowledge-based goods exhibit the law of increasing return. Once a company has absorbed the cost of making the first digital “copy” (e.g. of a piece of software or an electronic publication), the marginal reproduction cost approaches zero, resulting in huge potential profits.



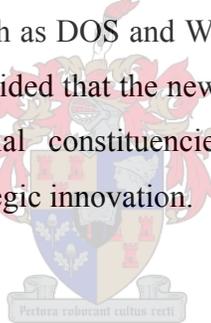
#### **4.10.3 The network economies of scale**

In a networked market, the greater the number of people connected, the greater the value of being connected, thus creating network economies of scale (Evans & Wurster, 1997). As the following example illustrates, as number of people who own MP3 software rises, the value of hooking up for any one individual increases progressively. In other words, the individual will have access to a large number of music sources. This self-reinforcing dynamic builds powerful monopolies. Businesses who take advantage of this dynamics and who move first to set standards or create market, can achieve critical mass.

#### 4.10.4 Acceptance of open standards

The word standard in general seems to indicate common acceptance or agreement on given practices or technology emerging in many ways. Mostly, businesses reserve the highest level of respect to de jure standards promulgated by world-class independent organizations and governments. Standards can also be developed by consortia working out specifications that would be maintained by industry incumbents. If the standards in a given industry are overly institutionalized and customized, aiming at making entry less possible, the most established powerful companies may exercise greater control over proprietary technology.

Most of the standards developed in new industries are de facto and open in ways where no single vendor or government can control them, and these standards are available to anyone willing to license. The emerging markets indicate that the impact of market power-based de facto standards (such as DOS and Windows) seems to be as strong as or stronger than de jure standards. Provided that the new standard is responsive to the needs and demands of many commercial constituencies, its acceptance by a business community will likely trigger strategic innovation.



#### Case 3: The MP3

##### **The MP3 History**

An oligopoly of the industrial age record companies and broadcast networks like RCA and CBS controlled the music distribution business. Today their dominion is fragmented. While partisans quibble about its profitability, convenience, sound quality, or long-term prospects, the MP3 phenomenon has changed forever the rule of the game of this \$38 billion industry.

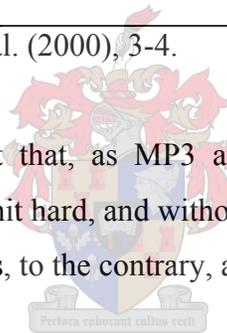
The Fraunhofer Institute, a German industrial electronics research company, released MP3 in 1991 as a freely available technical standard for the compression and transmission of digital audio. The user “business case” for MP3 is simply: buy a CD software for three hundred dollars, and you can download and save an entire pirated Beatles collection on

two CDs. At this point, you've made back your hardware investment, and now you can build the rest of your music library for the cost of the blank CDs.

Viscerally appealing to youngsters in the Net Generation demographic, MP3 attained critical mass in 1998, when it whirled through the Internet almost overnight. Millions of technology-literate kids and teenagers, high on music, low on cash, and sold on the mantra that "information wants to be free," used the Net to create and share MP3 software tools freely and to their heart's content. MPs show how internetworking and critical market mass can drive strategic innovation of business models. Piracy cost the music industry \$10 billion in 1998. At any one time, more than half a million music files were available on the Internet for illegal downloading. While the recording industry scrambled to deal with this hurricane of music piracy, most people were not even aware that all this was going on.

Source: Adapted from Tapscott et al. (2000), 3-4.

Transformational scholars suggest that, as MP3 and Britannica Encyclopaedia cases illustrate, hurricane of change can hit hard, and without warning (Evans & Wurster, 1997; Tapscott, et al. 2000). Other writers, to the contrary, argue that these situations are rare.



#### **4.10.5 Knowledge**

With the new economy becoming a global economy "knowledge knows no boundaries". Knowledge permeates through people, products, and organizations. In this economy, the majority of the workforces are people who work with their minds rather than their hands. It is an economy based on human capital and networks, which shows a shift from the industrial- based economy to a knowledge and information-based economy (Tapscott, 1997).

Consequently, knowledge workers have become the key form of capital. This is because an economy that is driven by knowledge and relationships relies more on intellectual (intangible) assets and less on the physical (tangible) assets that were important to the industrial age (Tapscott, 1997).

Therefore, knowledge has become the primary building block of a company's capabilities. It is focused on adding to the company's competence by enabling the firm to create something significantly better than others. It is central to the firm's competitive advantage and creates real value for the company. Accordingly, it is crucial to ensure that the company's most important assets – its knowledge and people – are “world-class” through attracting and developing people with specialized skills (Viscio and Paternack, 1996).

#### **4.10.6 Deconstruction**

In the new economy the traditional, command-and-control hierarchy is inadequate to respond to the new business needs. Hence, the industrial hierarchy is giving way to structures that are more responsive, flatter, and team-based (Tapscott, 1997). In conventional hierarchies, members are positioned in privilege relative to one another. Conversely, in networks, as reliable information becomes commonly available, there is a peer-like relationship among the members of the organization, and close relationship between the organization and its customers, suppliers, and competitors (Kelly, 1998).



Evans and Wurster (2000) define construction as the “dismantling and reformulation of traditional business structures” resulting from two forces: “the separation of the economics of information from the economics of things, that the blow up (within the economics of information) of the trade-off between richness and reach” (2000, p.39). Traditional business structures include organizations and value chains. When the trade-off between richness and reach is removed and the traditional link between the economics of information and the economics of things breaks, there is no longer a need for the components of these business structures to be integrated. These deconstructed pieces fragment into multiple businesses that have separated sources of competitive advantage, or recombine to form new business structure. Therefore, this process of deconstruction challenges the competitive advantages that depended on traditional business structures (Evans and Wurster, 2000).

#### **4.10.7 Immediacy / Zero Cycles**

Discontinuity is creating an era of near “zero cycles” where the life cycles of products and services have become considerably shorter (Prahalad and Oosterveld, 1999). The pace of business has also increased with rising customer expectations and new products entering the market at a much faster rate (Viscio and Paternack, 1996).

Therefore, immediacy has become a key driver and variable in business success. This immediacy imposes new demands on organizations to continuously and instantly adjust to changing business conditions (Tapscott, 1997; Prahalad and Oosterveld, 1999). Succeeding to operate at this rapid pace becomes a source of competitive advantage.

#### **4.10.8 Non-linear Innovation**

Hamel (1998) explains the challenge today is to become the “architect of industry revolution”. This means to be the creator of the kinds of fundamental change in business models that transform industries. And the way to achieve this is through non-linear innovation. In his leading the revolution (2000) Hamel states that in a nonlinear world, only nonlinear ideas will create new wealth. Radical, nonlinear innovation is one of the ways to break out of the hyper-competition experienced in many industries. This innovation requires a company to let go of the constraints of industrial conventions and come up with entirely new solutions to customer needs.

To give an example of how new solutions deliver value to customer, Christensen (1997) illustrates two types of technology changes: sustaining technological changes and disruptive technological changes. Sustaining technologies (whether discontinuous/radical or incremental in character) improve performance of established products. Disruptive technologies, on the other hand, bring to a market a different value proposition than had been available previously. Products based on disruptive technologies are “cheaper,

simpler, smaller, and frequently, more convenient to use” (1997, p. xv) however, it is these kind of changes that have brought down industry leaders.

Hamel (1998) categorizes two kinds of innovation. The first is innovation with respect to the firm’s historic strategy (change own strategy). The second is innovation with respect to the firm’s industry and its competitors (proactively reinvent the industry). Succeeding at both kinds of innovation is not easy and few companies are skilful enough to do both. This also applies to many start-ups that are capable of creating radical business models but do not exist long enough to discover another strategy (Hamel, 1998; Youngblood, 2000).

Govindarajan and Gupta (2001) support this view. They advise that the pursuit of changing the rules of the game should be a perpetual process, since, with time, every innovation will eventually be imitated by competitors. Hence, before the current competitive advantages are fully exhausted, companies should already be exploiting new opportunities in the external environment and/or changing industry dynamics. The real challenge for most firms is not whether the rules of the game will change (because they will change); rather, it is will they take the initiative to do so.

“Business concept innovation is the capacity to imagine dramatically different business concepts or dramatically new ways of differentiating existing business models” (Hamel, 2000, p.65). Hamel describes business concept innovation as the key to creating new wealth, a way for newcomers to succeed despite resource disadvantages, and for established companies to restore their previous success and remain competitive.

Basically, one way to break away from head-to-head competition is to develop a business model different from what has been created before. Strategy should be a “quest for variety in all components of the business model” (Hamel, 2000, p.69). This results in companies with highly differentiated strategies that have “unique capabilities, unique assets, unique value propositions, and unique market positioning” (2000, p.50).

#### 4.10.9 First-Mover Advantage

In addition to exogenous changes taking place in the business environment, such as technology and the global landscape, firms often have the ability to proactively reshape the boundaries, structure, and dynamics of their industry's environment.

First movers are the first to introduce new goods or services. In doing so, first movers earn “monopoly profits” until competitors imitate their innovations. Therefore, early and fast movers can achieve the highest returns (Hitt, et al., 2001, p.484). Being a first mover in responding to environment change, or being a pioneer in actively initiating change in one's environment, can give a firm a major competitive advantage (Govindarajan and Gupta, 2001).

Kelly (1998) explains since the network economy favors the “nimble and quick”, those companies and technologies that grow gradually and slowly will not be able to compete with early starters. And because of the law of increasing returns, not only will they find it difficult to catch up with first movers but may find it difficult to compete at all.

However, Bartlett and Ghoshal (2000) explain there are instances where being a late mover is a source of competitive advantage rather than a disadvantage. By benchmarking and adapting competitors' business models, late movers can learn from the demands, opportunities and challenges faced by their competitors and benefit by discovering niches overlooked by competitors or adopting different business models from that of competitors.

Thus, although some distinct advantages accrue to early movers, in some instances, the early movers merely bear the “pioneering costs” while the advantages go to those who learn from their early mistakes (Bradley and Nolan, 1998; Boulding and Christen, 2001).

## 4.11 Summary

It is becoming evident that a new strategic thinking that guides and assesses organizational capabilities – both adaptive and proactive is necessary for creative, sustainable organizational success in the knowledge economy. It is important to re-invent and change the configuration of the overall value-creating system. The traditional mindset of competition-focused, “direct-and-control”, and existing industry value chain optimization, simply cannot comprehensively deal with the increased fluidity and creativity engendered by the knowledge-networked economy of today.

Being a successful manager in the 21<sup>st</sup> century knowledge economy calls for a new mental model – a manager suited to a world of turbulence and seeming chaos. By developing and implementing appropriate coherence mechanisms, and handling the challenges of paradox by developing robust adaptive strategies, because the traditional strategic management tools are deficient when dealing with fast-changing industries and business model reinvention.



## CHAPTER 5

### DEVELOPING NEW BUSINESS MODELS BY LEVERAGING DEMAND AND SUPPLY CHAINS IN BUSINESS ECOSYSTEMS

#### 5.1 INTRODUCTION

Today's economy has become increasingly turbulent, characterized by rapid shifts in the marketplace, heightened competitive pressures. Manufacturing companies are facing significant challenges as a result of an increasingly competitive environment. These challenges include dealing with: increasingly complex, extended, global supply chains; outsourced manufacturing and distribution; and customers who are demanding shorter lead times, greater order flexibility, and vendor managed inventory. They have also everything to do with paradigm-changing business models. The next generation in supply chain and business management is at hand.

The business model is concerned with the nature and pattern of “value exchanges” between an enterprise and its suppliers, customers, and other entities in its “value chain” as described by Porter (1985).



In today's ever-changing business environment, managing operations is like shooting the rapids of a raging river. Just coped with one challenge, another crops up where you least expect it. You think you see a path to take clearly ahead, but in an instant the riverbed drops, rocks emerge, and it's all you can do to keep your head above water. This is the nature of today's unpredictable business landscape, and everyone's in the same perilous boat. Especially for those responsible for warehouse and logistics execution, survival depends on the ability to respond quickly, differently and efficiently to what lies ahead-and out of immediate sight.

In today's market, power has shifted to the customer. They want more choices, at a lower cost, delivered faster than ever before. To overcome these challenges, companies have to

adopt new business strategies; new business models which can result in shorten lead times, improve delivery performance, superior product quality and improve the way they used to do business (Mintzberg and Quinn, 1996).

Supply chains are facing broader and deeper challenges than ever before. Traditional supply chain business models are giving way to the emergence of new horizontally integrated, high-performance, on demand value chain networks.

These new supply chain strategies open up competitive advantage opportunities to those able to execute with partners at a high level of performance. Companies that will not innovate their supply chain through implementing new and innovative business models, may face significant obstacles to delivering expected profitability on a long-term basis (Miller and Whitney, 1999)

During the past years, companies have focused on supply chain improvements with initiatives centered on operational excellence (rapid return on investment) and cost cutting. New SCM business models are required to meet the expected level of profitability, performance and partnership. Following best-in-class supply chain leaders, companies are now investigating how they can leverage the supply chain to outperform their competitors and progress in supply chain maturity.

For the purpose of this chapter, three areas of focus have been identified: profitability, performance and partnership. From the previous chapters, the importance of innovating, reinventing, creating new business models have been described. Demand and supply chain will be examined in this chapter and the way new business models can leverage them, will conclude it.

## **5.2. Demand and supply chain management**

The supply chain (SC) is a linked set of resources and processes that begins with the sourcing of raw materials and extends through the delivery of end items to the final

customer (Bridgefeld Group ERP/Supply Chain Glossary, 2004). While the separation of SC activities among different companies enables specialisation and economies of scale, many important issues and problems need to be resolved for a successful SC operation- the main purpose of supply chain management (SCM).

According to the Global Supply Chain Forum, SCM is 'the integration of key business processes from end user through original suppliers that provide products, services, and information that add value for customer and other stakeholder' (Chan & Qi, 2003). Talk about SCM, means that there is a proactive relationship between a buyer and supplier and the integration is across the whole SC, not just first-tier suppliers (Cox, 2004). Most SCM related-problems stem either from uncertainties or an inability to co-ordinate several activities and partners (Turban, McLean, & Wetherbe, 2004).

One of the most common problems in SC is the so-called bullwhip effect. Even small fluctuations in demand or inventory levels of the final company in the chain are propagated and enlarged throughout the chain. Because each company in the chain has incomplete information about the needs of others, it has to respond with a disproportional increase in inventory levels and consequently an even larger fluctuation in its demand relative to others down the chain (Forrester, 1958, 1961). Several authors (Forrester, 1961; Holweg & Bicheno, 2002) have shown that the production peak can be significantly reduced by transmitting the information directly from the customer to the manufacturer.

Another problem is that the companies often tend to optimise their own performance, in so doing disregarding the benefits of the SC as a whole (local instead of global optimisation). The maximum efficiency of each chain however does not, however, necessarily lead to global optimisation (Gunasekaran, Patel, & McGaughey, 2004). In addition, human factors should also be taken into consideration: decision-makers at various points along the SC do not usually make perfect decisions (due to the lack of information or their personal hindrances), their decisions are also influenced by employee reward systems. (McGuffog & Wadsley, 1999).

#### Case 4: Tetra Pak, Reinventing the Concept of Customer Value

##### **From Traditional to Reinvented Value**

There are many options for packaging materials, including steel, aluminium, glass, plastic, paper, and fiber-foil (metal and paper composite). Traditionally, it was typical for package manufacturers to make these containers and then ship them to processors of milk, juice, and other liquids. The processors filled the containers and transported them to supermarkets for sale to consumers.

Tetra Pak altered this model by offering customers a total system: filling equipment, packaging materials, and distribution equipment such as conveyors, tray packers, and film wrappers. Customer – to Tetra Pak’s model: containers made at the point where beverages are ready to be packed.

The Tetra Pak system has two unique features. First, the firm installs its filling equipment on the beverage producers’ premises. Inside each machine is a continuous roll of paper with four layers of plastic coating and an additional layer of aluminium coating. When liquid is poured, the roll of paper curls into a tube which is then heat-sealed and cut into a carton. There is essentially zero time lag between making and using the container. Second, air and light inside cartons tend to cause much faster decay in liquids. With Tetra Pak’s process, the fact that cartons are formed after the liquid is poured enables Tetra Pak to use a specific vacuum-filling technology that keeps air out of the liquids during the filling process. Then, once the package is sealed, the plastic and aluminium coatings continue to keep air out of the carton while creating a secure barrier against light. With such an “aseptic” property, Tetra Pak cartons do not require refrigeration to preserve liquids. Milk has a shelf life of six months, juices 12 months.

Tetra Pak’s business model has altered the concept of value at every stage of the traditional industry value chain:

For container Manufacturers. Completely eliminating this stage of the chain has yielded several benefits. First are the obvious savings in factory space as well as the labor and overhead costs involved in making the containers. Second, Tetra Pak saves the cost of “transporting air” from container manufacturers to beverage producers. Not only is transportation expensive, but some containers, such as glass bottles, are breakable in transit. Third, the company avoids handling costs at two points: loading the empty containers onto the truck at one end and unloading and storing them at the other.

For Beverage Processors. In addition to eliminating the cost of inbound handling of empty containers for beverage processors, several additional benefits have accrued at this stage. Cartons are made only when needed, thereby ensuring “zero” inventories of empty cartons in the pipeline and saving financing costs and storage space. Once filled and sealed, the beverages do not require refrigerated trucks for transport to supermarkets, even on long hauls. Whereas glass bottles, plastic jugs, and “gable top” paper cartons cannot be stacked on top of each other, the box-shaped Tetra Briks can be stacked up easily. Traditional containers require crating: in the case of glass bottles, partitions are even needed between each bottle to prevent breakage. Moreover, the narrow necks of bottles and jugs and the gabled tops of paper cartons waste space. But the rectangular, flat structure of Tetra Briks ensures efficient use of space.

Producers also enjoy the benefit of one-stop shopping for complete systems, with matching equipment at every stage. This means customers have a single point of accountability, ensuring uninterrupted production. Tetra Pak in turn has assembled an experienced and well-trained service force that assures customers fast, efficient repairs and equipment maintenance.

Tetra Pak’s close relationships with beverage companies have prompted it to dedicate more than 1,000 R&D engineers worldwide to focus on customer needs, develop new packaging designs, and continuously improve processing and distribution systems. As a result, the company has up-to-date technology in its filling and sealing systems, which have been rated the best in the industry. By leasing its filling machines, Tetra Pak offers

customers two attractive features: low rental outflow and protection from technological obsolescence. Having locked up beverage companies on long-term machine leases, Tetra Pak enters into contracts with customers to supply them with packaging materials at attractive margins. The materials have been custom designed for Tetra Pak machines, effectively giving the company a virtual monopoly in providing raw materials to the filling machines. Once familiar with Tetra Pak machines, and having trained employees to operate them, beverage companies have little incentive to switch to other suppliers.

For Supermarkets. A significant added value for supermarkets has been the savings in handling – a major cost element. Because Tetra Briks can be stacked up, beverage producers usually load them onto trucks on a wheeled cart. At the supermarket, the drivers wheel the cart inside the store and set it up on the display space. In contrast, glass bottles, plastic jugs, and paper cartons still cannot be stacked up and require unloading and handling by supermarket personnel. Further, unlike Tetra Pak cartons, other types of packages require refrigerated sections inside the supermarket to preserve the shelf life of the liquids – another major cost item.

For End-User Customers. A major value for end-use customers is the convenience of the Tetra Pak cartons. Glass bottles are heavy, bulky, and breakable. Plastic jugs and paper cartons require refrigeration and are not as convenient in school lunches and on picnics. Tetra Pak cartons, on the other hand, are compact in size, convenient to use, appealing in appearance, and competitive in price. And in emerging economies like India, China, and Brazil, where sizable populations live in places with minimal or no refrigeration facilities, the Tetra Pak system is especially well suited. Without Tetra Pak cartons, these markets would be woefully underserved.

Source: Adapted from Govindarajan and Gupta (2001) Strategic innovation: A conceptual Road Map Business Horizons, 44(4).

### 5.3. Designing and Implementing a Supply Chain Strategy

It is important that once a company decides on a supply chain strategy, it must go through a process of collaborative design. The majority of collaborative programs today are best described as “joint participation” programs (Anderson & Lee, 1998). This means sharing sales, production, marketing, and process information in order to improve the product flow through the supply chain. Companies must consider collaborative design, as a structured process where partners map supply chain flows, structures, asset deployment, and responsibilities with a proper allocation of risks and rewards.

Information sharing is important when integrating the supply chain and is a key enabler. Ellesmere (Balsmeier and Voisin, 1996) proposes a best practice approach to information sharing as follows:

- 
- Having a common vision across the business for system functionality and architecture.
  - Taking a consistent tried and tested approach to system definition, design and implementation.
  - Ensuring that planning and transactions systems are closely coupled, and systems are flexible enough to accommodate changes in the mix between centralised and decentralised control activities.
  - Planning for real-time integration and visibility of the information to be available within the business and across the boundaries with supplies and customers.
  - Using package-based applications where appropriate to increase speed and reliability to reduce implementation costs.
  - Ensuring that information requirements are consistent with key performance indicators.

Gattorna and Walters (1996) highlighted the following direct and indirect benefits of having an effective communication system:

- **Direct Benefits**

- Reduced lead times and lower inventory holding requirements throughout a supply chain, improved transportation and facilities utilisation.
- Reduced working capital and improved cash flow.
- Reduced shrinkage and risk of obsolescence

- **Indirect Benefits**

- Faster, more effective management decisions.
- Faster, more effective communication.
- Increased control of inventory.
- Improved trading relations.

Meeting the challenges posed by the rapidly shifting consumer-demand-driver marketplace is very difficult. It is therefore essential for companies to define strategies for both their overall business and their supply chains before they can develop and implement specific tactics in support of those strategies. Some companies discover that the two “strategies” are, in fact, two aspects of a single overall business plan, and that the two must be closely aligned.

Once a corporation has clearly defined its supply chain strategy and understands how it fits into the corporate strategy, the next step is to define an appropriate supply chain configuration. Supply chain strategies have implications far beyond the boundaries of a single company; they extend to the relationships between all supply chain partners. The process of supply chain configuration should be viewed as a cross-enterprise exercise. The key outcome should be twofold: identifying the best options to deliver product to consumers cost effectively; and determination of which corporate entities are most capable of taking ownership of specific processes and activities.

Look beyond initiatives that focus on functional excellence alone, since breakthrough opportunities can come from outside these functions, and are commonly found at the interfaces. Partner participation should be an early part of the process and do not ignore non-traditional trading. Ensure that the strategic evaluations are bolstered by strong field operation involvement in the joint design, since failure on this level can deliver results that cannot be implemented. Pilot projects can be used in the same way as single company effort, but care should be taken to emphasise the narrow-scope of multi participant efforts in the early stages (Monczka & Morgan, 1999).

All the initiatives mentioned for Supply Chain Management implementation, requires some level of relationship building. The idea of supply-chain “partnerships” has been discussed frequently for the past several years. All of these initiatives require various levels and types of co-operation among the supply chain partners, ranging from transactional to interactive and interdependent. Transactional relationships do not require much shared information or decision-making. Therefore, it should not be difficult for most partner companies to implement. A more interactive relationship, however, requires shared information, some joint planning and some shared decision-making. Such a relationship requires deeper co-operation, the willingness and capacity to learn new skills, and varying degrees of trust. The boundary between companies becomes blurred, as information (proprietary or otherwise), decisions, investments, and assets are shared. The value of goodwill, candour, and skills required in such interdependent relationships cannot be overemphasised. Companies that are not near this level of co-operation will require radical transformation to achieve a successful relationship with multiple partners (Cooper, Ellram, Gardner & Hanks, 1997).

Some integration can be achieved by forcing a weaker partner to become the victim of cost and value shifting. This is not a sustainable proposition, and it generates longer-term supply chain inefficiency. Co-operation is the cornerstone of successful integration, and there is more value that can be achieved through positive communication than through coercive alignment. Success in designing and implementing a supply chain strategy requires a co-ordinated set of actions involving all relevant supply chain partners. Supply

chain strategies require co-ordinated cross-functional and multiple partner decision making throughout the entire supply chain. Like any other large-scale, it is important to build the business capabilities and not just the business processes, and also to support them with changes to the organisational structure and enabling technologies. Only then can the strategy be affected. Likewise, the strategy and the initiatives chosen need to be aligned with the capabilities that can be realistically achieved in each of these three areas. The core competencies within each firm must be taken into account.

### **Case 5: Xerox and Canon, Redefining the Customer Base**

#### **Xerox's big Copier Business Model**

Xerox's decision to serve large corporate customers allowed it to build a business model with huge entry barriers. Xerox had more than 500 patents that protected its plain paper copying (PPC) technology. The alternative technology at that time was coated-paper copying (CPC), which was inferior to PPC machines produced one copy at a time, whereas PPC machines could handle high-volumes, multiple copies. With their massive duplicating needs, corporate customers preferred scale-efficient big machines. PPC patenting effectively ruled out new entrants.

The choice of corporate customers also allowed Xerox to build a direct sales force, since there was a limited number of customers to serve. By 1970 Xerox has created an enviable sales force capability: tremendous technical expertise, long-term customer relationships, and deep product knowledge. Any new entrant that wanted to imitate its business model would have to replicate such a sales network – A high fixed-cost activity and thus a major entry barrier.

Xerox's customers, primarily Fortune 500 companies, did not care as much about price as they did about the need for 100 percent up-time on their machines. Because central copy centers typically had one large machine, the entire center came to a standstill when the machine broke down. So it was not enough for Xerox to offer excellent service; it had to

guarantee high outstanding service 24 hours a day. As soon as a machine went down, Xerox sent service staff to fix it. By 1970, Xerox had built a world-class, round-the clock servicing capability – another formidable entry barrier.

Instead of selling machines outright, Xerox leased them. Lease financing of a complex product in the context of rapidly evolving technology is always a high-risk activity. But Xerox understood and controlled the pace of technological evolution much better than any other photocopier company, so its level of risk in lease financing was much lower than that of its competitors.

Finally, through a decade of expenditure on marketing and advertising, Xerox established a powerful brand name in the industry. In fact, “copying and Xeroxing” became virtually synonymous. Any new entrant to the market had to content with Xerox’s strong brand image.

All of these combined entry barriers – PPC patents, direct sales force, 24 hours service, leasing, and brand name – were simply overwhelming for a start-up firm. They posed significant problems even for an established office supplier like IBM. Certainly, IBM faced an insurmountable barrier in the form of technology patents over PPC. And it sold mainframes to corporate customers through a sales force and serviced them through an extensive servicing network in the 1960s. Even so, its sales and service staff were not easily transferable to the copier market without additional large investments in technology and product-specific training. It is not surprising, therefore, that Xerox enjoyed a virtual monopoly in the big copier industry.

### **Canon’s Distributed Copier Business Model**

Canon dedicated its research efforts during the 1960s to develop an alternative to Xerox’s PPC technology. In 1968, it invented the “New Process” (NP) technology, which used plain paper to photocopy but did not violate Xerox’s patents. Canon deployed two of its existing competency bases – microelectronics (from its calculator business) and optics and imaging (from its camera business) – in developing the NP technology. Further, it

benefited from a 1975 FTC ruling that forced Xerox to license its dry-toner PPC technology freely to competitors.

In the late 1970s, Canon successfully designed personal copier at a price point significantly below Xerox's big copier to appeal to small businesses and individuals. Its personal copiers, which made 8 to 10 copies per minute, ranged in price from \$700 to \$1,200. In contrast, Xerox's high-speed machines, which made 90 to 120 copies per minute, had a price range of \$80,000 to \$129,000. Canon's effect on the copier industry was similar to its earlier effect on the camera industry when it introduced AE-1, the first mass-market, 35-mm, single-lens reflex camera with microprocessor control that could produce close to professional quality photographs but sold for significantly less than Leica and Nikon.

Because Canon's target segments involved millions of customers, it could not use the direct sales force approach. Instead, it chose to distribute its personal copiers through traditional third-party distributors: office product dealers, computer stores, and mass merchandises like Sears. This distribution approach not only eliminated Canon's need for a huge cash outlay but allowed it rapid market entry.

Canon overcame Xerox's formidable advantage in 24-hour servicing capability by several means. First, because of the obvious inverse relationship between product reliability and the need for service, it designed its machines for reliability. Its copier had just eight units that could be assembled on an automated line by robots without any human helps. Second, it made replacement parts modular so that end-use customers could replace them when they wore out. Copier drum, charging device, toner assembly, and cleaner were combined into a single disposable cartridge the customer could remove and replace after 2,000 copies. Third, Canon's design was not simple that traditional office product dealers could be trained to repair the machines. Fourth, with distributed copying, people could use other departments' machines when their own were down. Unlike central copying, 24 hour service was not required.

Canon's low-cost personal copiers were sold outright for cash, so leasing was not an issue. And its strong brand name for high quality and low cost in the camera business was leveraged successfully when it launched personal copiers.

Thus, Canon achieved leadership in low-end copiers by radically redefining the customer base. There might be several reasons why Xerox did not respond soon enough to Canon's attack with its own version of distributed copying. It might not have perceived Canon as a serious threat because Canon did not initially go head-to-head against Xerox. Perhaps Xerox simply did not expect low-end copier to become a huge market segment. In fact, during the 1970s Xerox was more worried about IBM and Kodak, which entered the copier industry at the high end by playing by Xerox's rules. Big machines had a high profit margin per unit, whereas personal copiers had a low one. Xerox might have feared potentially cannibalizing its high-margin business for low-margin copiers. It had invested heavily in a sales force, which probably would not have welcomed the use of the third-party dealers to sell personal copiers that would compete with big ones. Similarly, Xerox's service network, which operated as a profit center, had little incentive to support programs to produce quantum improvements in product reliability. Moreover, under the leasing policy Xerox had not fully recovered its investment on its installed base, so it likely did not want to risk making that base prematurely obsolete by offering personal copiers. Finally Xerox's customers – heads of copy centers in large corporations – were critical to Xerox's success and so might have had an important influence in its internal decisions. They would probably resist the introduction of distributed copying for fear of losing their power base.

Source: Adapted from Govindarajan and Gupta (2001) Strategic innovation: A conceptual Road Map Business Horizons, 44(4).

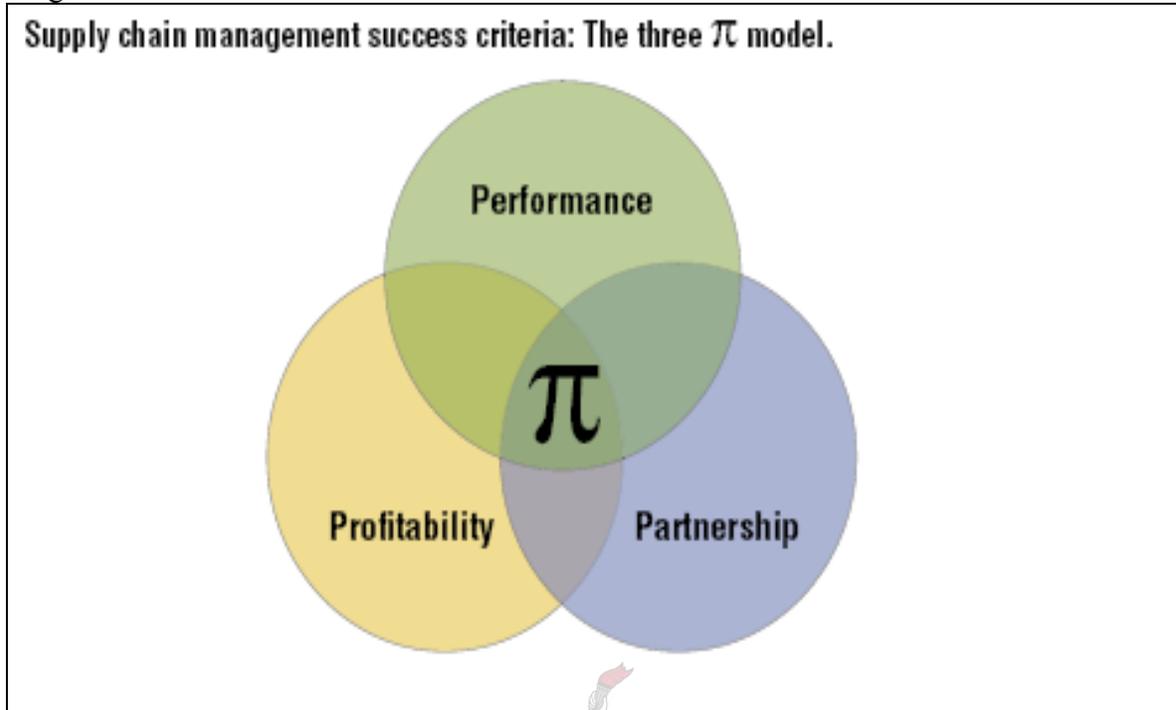
#### **5.4. New competitive advantage from existing investments: Profitability, performance, partnership**

The continuous global and local economic fluctuations have increased the stress on manufacturing businesses. SCM processes are challenged to provide operationally excellent, lean, cost-effective and rapid delivery of products and services globally. Product lifecycles are becoming ever shorter as customer demand is becoming increasingly volatile (Barrat, 2004, Lambert & Cooper, 2000). Markets, supply and operations are becoming progressively more global. Key trends are emerging and evolving:

1. Supply chains increasingly include outsourcing and partnerships, presenting even greater challenges in managing demand and supply, and controlling logistics spend.
2. Realtime and accurate access to relevant customer and supply chain operational data, such as inventory, orders and shipments is essential to meet customer service level requirements.
3. Pure product innovation is lessening in importance as focus moves toward the product time-to-market and lifecycle management to support higher sales and profitability objectives. There is also increased importance being placed on product "afterlife" management.
4. Optimizing supply chain performance, productivity and responsiveness is increasingly important to achieve cost- and service-level objectives.
5. Technology components with proven and rapid return-on-investment are favored to support critical supply chain processes, such as leaner manufacturing processes, demand-driven supply chains and customer responsiveness. New technologies, such as RFID are changing the game in SCM.

Supply chain executives and managers are now concerned about the three  $\pi$  focus areas for SCM success: profitability, performance and partnership (see Figure 14).

Figure 14:

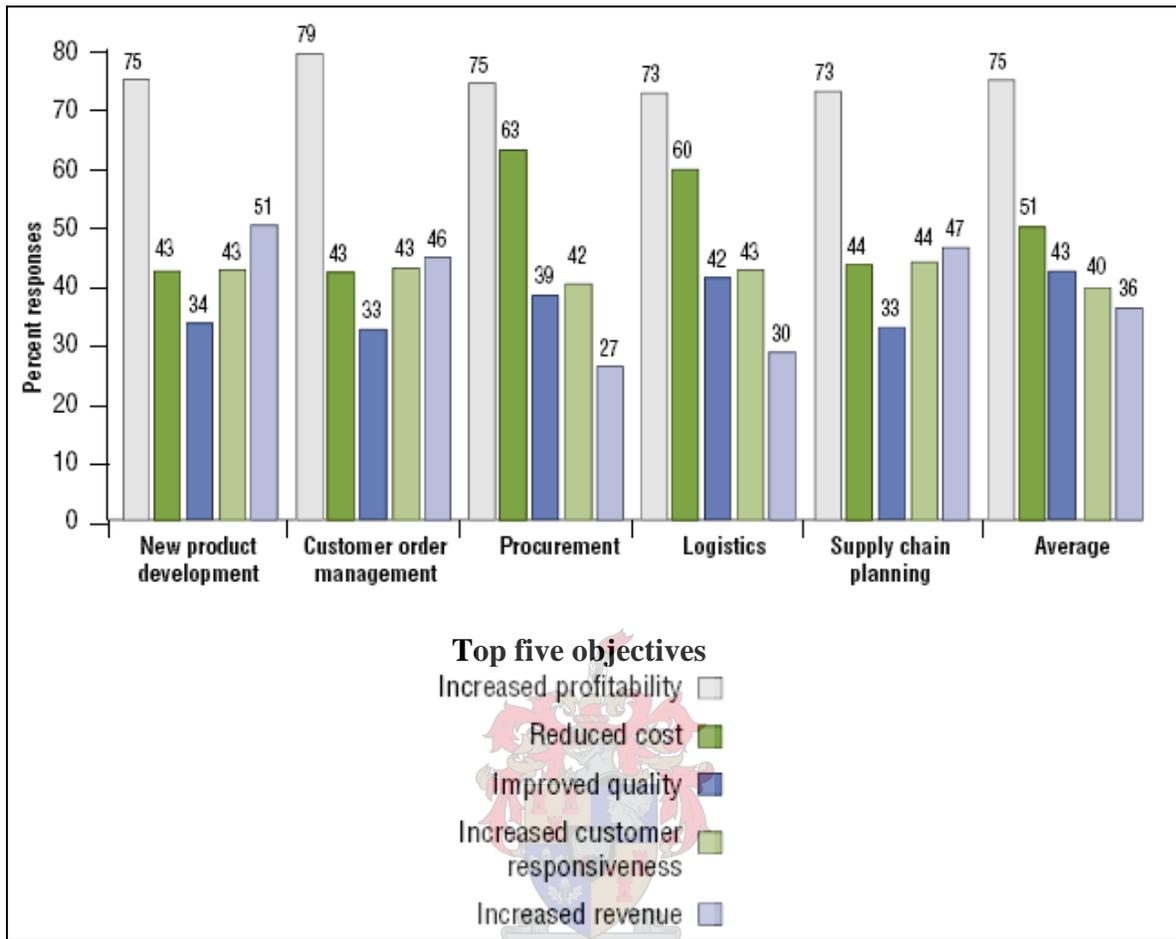


Source: Thompson and Strickland (1998), 142.

#### 5.4.1 Profitability

The primary objective of managers is to increase profitability (Mason-Jones, & Towill, 1997), (with supporting objectives of both cost reduction and increased revenue). With greater uncertainty and volatility of demand, increased customer responsiveness is also important.

Figure 15: Top objectives by supply chain process area



Source: Thompson and Strickland (1998), 98.

Traditionally, SCM focus for most companies has been fixed primarily on cost reduction. Current margin pressures are severe, and supply chain performance is centered more and more on the overall business impact and shareholder value. As a result, companies need to reduce the fixed costs and capital requirements of supply chain operations and move to a more "variable" cost structure that can be controlled and managed in direct relationship to customer demand (Lambert & cooper, 2000).

Companies are centering their efforts on their customers to deliver higher profits. This is true for all supply chain activities, including the development of new products.

### **5.4.2. Performance**

There is renewed attention on optimizing supply chain performance effectiveness to support profitability objectives. Performance objectives – when viewed from an end-to-end supply chain perspective – require realtime integrated visibility of key functions and processes with a multitude of value chain network partners (Hengst & Sol, 2001). By creating an environment of viable information, supply chain activities are proactively managed through:

1. Realtime access to transactional information to quickly identify root causes of issues
2. Shared information about plans, issues and actions that enables rapid decision-making in collaboration with partners and service providers
3. Exception management through intercompany alert messaging, proactively warning a decision-maker if an action must be taken or a trend is emerging
4. Standardized and aligned measurements to monitor and assess daily performance
5. Scorecards and trend analysis of historical data to identify performance trends and recurring issues.

Supply chain performance is being monitored for: “perfect order” attainment (on-time, right product, right price, damage free); cycle time reduction in new product time-to-market; and customer product delivery. Productivity initiatives and performance score-carding continue to target improvements in customer fill rates, retention, stock-outs, supplier order fill rates and lead times and inventory turns.

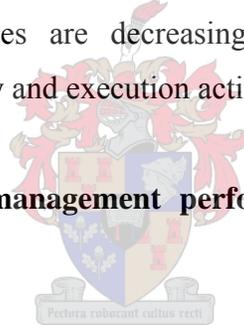
### **5.4.3. Partnership**

More and more, successful companies are organizing their supply chains horizontally (as opposed to the traditional functional silos) and are orchestrating end-to-end, extended supply chains (value chain networks), integrating inside and outside of the four walls to the extended enterprise (Disney, Naim & potter, 2004).

As businesses focus on their core capabilities, non-core supply chain processes are increasingly being outsourced (Wagner, Fillis, & Johnsson, 2003). The use of outsourcing partners for cost and capability reasons has increased dramatically, expanding the number of players involved in delivering value to a customer. As the number of players increases, so do the complexities. To optimize efficiency and enable effective and responsive customer value delivery across the extended enterprise, collaboration, process and information integration and visibility with strategic supply chain partners is imperative.

Many companies are continuing to focus efforts on partner collaboration and the need to coordinate/integrate supply chain event management to reduce latency and end-to-end supply chain cycle time. Supply chain managers are concerned about latency in the extended supply chain, which is the time from the occurrence of an unexpected event until resolution. Many companies are decreasing latency, as they focus on the synchronization of demand/ supply and execution activities.

### **5.5. Innovative supply chain management performance is characterized by on demand maturity**



As companies progress from a static, non-integrated enterprise model through incremental steps – including functional optimization, horizontal process integration and automation, external collaboration and optimization – toward the vision of an on demand supply chain model that is integrated end-to-end across the business and with key partners, suppliers and customers (Gupta & Banerji, 2004).

Many companies are now advancing from functional excellence to horizontal process integration and automation by concentrating on improving a single supply chain process, such as warehouse management and integrating its supporting processes and information cross-functionally throughout the enterprise (Gavirneri, 2002). There also appears to be some incremental progress in external collaboration with supply chain partners and constituents.

Attributes of an on demand supply chain include:

- Focused – To identify core supply chain capabilities and strategic competencies to be managed in-house while selecting and orchestrating a network of strategic supply chain partners to manage the non-core and non-strategic tasks
- Responsive – To sense and respond with flexibility and speed to any customer demand, market opportunity, or external threat, no matter how frequent or sudden
- Variable – To build variable cost structures designed to execute at a high level of productivity, cost control, capital efficiency and financial predictability
- Resilient – To cope with threats, disruptions and changes while striving to control the impact on the efficiency of the overall supply chain.

The turbulent market conditions and competitive environment of the early twenty-first Centuries have raised the stakes for SCM. Most managers adopt rapid response practices to adjust to changes in market conditions.

Companies need to help ensure that costs are variable and can move up or down, based upon revenues. During revenue growth times, costs will go up, as expected. However, if revenue declines, then costs will also go down if costs are aligned with revenue. It is why optimizing variable supply chain costs in alignment with revenues are important (Prasad, 1999).

Advanced supply chain management principles include sharing risk outside the four walls of the company – with suppliers, partners and others, rather than concentrating inside (Trkman, 2000).

To respond to changes and conditions faster than traditional supply chains, advanced (mature) SCM practices are supported by applications and an open architecture that can enable rapid or realtime, accurate information visibility inside the company, as well as outside its four walls.

## **5.6. New product development, which is about profitability: Cost and time are paramount**

The accelerating pace of innovation and the growing ability of competitors to replicate new product features (such as service) require NPD processes and solutions to reach a new level of performance (Trkman, Indihar-Stemberger & Jaklic, 2005). Companies failing to reach that level of performance will obtain fewer market successes and report reduced profits due to shortening product market life. Even if time-to-market has to be further reduced, development cycles have already been compressed through the use of new approaches for NPD. Companies will now develop strategies to master the cost of innovation (headcounts, infrastructure, technology and support) but also manage the implications of product lifecycle management (PLM) throughout the entire end-to-end supply chain.

Leading NPD practices include:

1. Product innovation management (market planning, portfolio and pipeline management)
2. Collaborative product development lifecycle management (extended enterprise):
  - Design with customers through collaborative requirements gathering
  - Collaborative product design with suppliers
  - Logistics and "get-to-market" requirements included in product/service design
3. Component, platform and asset commonality (increased component reuse)
4. Design outsourcing for non-core technologies
5. Multi-technology design process integration (for example, mechanical, electronics, software).

Increased profitability is the major objective shared by most managers. New product development emphasis is on better service to customers, leaping the competition, and delivering products and service to market profitably.

Dynamically changing customer requirements and increased levels of global (multichannel) competition create greater challenges for NPD efforts. Balancing dynamically changing customer requirements while managing costs and resources, is key

to bringing new products and services to market in a timely fashion to meet profitability objectives.

An innovation strategy is essential to gain a sustainable competitive advantage and leapfrog the competition. The focus can be on customer requirements. The continuous innovation strategy is critical at a time when customer requirements are more unpredictable due to globalization (Jacobson, 1995).

Combining product/service innovation with a focus on changing customer requirements is the balancing strategy of new product development success. Partnerships and internal collaboration with manufacturing require companies to be able to share technical documents (drawings, specifications, and the like)

Companies not only have to harness the development challenges, but also increase their performance for NPD by being able to reduce the time-to-market and keep their development projects on track (Cunningham, & Froschl, 1999). There has been a steady improvement in time-to-market, driven by the implementation of stronger development processes and systems to support it.

Collaboration with customers and suppliers is considered the best way to better sense customer requirements and propagate the information up the value chain to suppliers. The reallocation of resources is a way to increase performance of the NPD processes by focusing on key products. Formal processes are required to both optimize the internal resources (headcounts and technical means) and build a framework to engage in NPD collaboration with business partners.

### **5.7. Supply chain planning: It's all about sensing and responding**

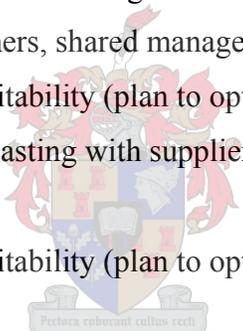
The increasing volatility of customer demand and the supply shocks generated by the environment require supply chains to become more responsive and more adaptive (Phipps, 2000). Companies are also focusing their operations on core competencies,

increasingly outsourcing more of their operations and collaborating with an increasing number of supply chain partners.

As supply chains become more complex and less linear, due to both external constraints and opportunities, supply networks planning and collaboration will become the new standard (Hoek, 2001). The competition among companies is now shadowed by a competition among supply chains.

Leading supply chain planning practices include:

1. Specialized and differentiated supply chain strategies based upon customer segmentation, customized service levels and strategic planning (asset optimization, make or buy strategies)
2. Collaborative planning and forecasting with customers, including continuous replenishment programs for customers, shared management of inventory (visibility)
3. Price optimization based on profitability (plan to optimize profitability)
4. Collaborative planning and forecasting with suppliers
5. Multisite inventory optimization
6. Price optimization based on profitability (plan to optimize profitability).



Political and economic uncertainty has resulted in increased costs or decreased sales for more companies and has therefore influenced their profitability. Companies have developed a clear understanding of the fact that their sustainability will depend on their ability to be responsive, resilient and variable in order to drive superior financial performance (Persson, & Olhager, 2002).

Applications for supply chain planning, especially for demand planning and inventory planning and replenishment are widely used – both vendor applications and custom-developed applications. Companies are progressively adopting planning tools to increase both productivity and profitability. System-based supply chain planning has now reached a level of maturity.

## **5.8. Customer order management: Real-time processing leads to superior customer experience**

Customers are becoming more demanding. Their expectations are evolving toward greater levels of service and response with higher degrees of product and service customization (Owens, & Levary, 2002). Empowered customers expect on-time delivery, self-service with real-time order configuration and status information, with product/service bundles priced optimally. New customer and distribution channels are being created, enhanced by technological innovations and geographical expansion. Existing channels are under pressure and require constant change to retain market position. Customer satisfaction continued sales growth and retention depend upon accurate and efficient order management and fulfilment.

Leading customer order management practices include:

1. Supply chains that can respond "on demand" to shifting customer requirements and fluctuating demand signals
2. Real-time visibility and event monitoring of customer, product and supply information throughout the value chain
3. CRM tightly integrated with supply chain planning and execution processes
4. Single face to the customer across business units, with order configuration and dynamic pricing
5. Conditioning demand based upon available supply, including pricing and promotions
6. Sell and promote based upon current inventory make/supply position, with ability to provide up-sell and cross-sell opportunities
7. Value chain partners (suppliers, service providers) integrated to provide differentiated customer segment product/service bundling and superior customer service levels.

Increased profitability (increased revenue and reduced cost) is the top driver of customer order management performance. This centered attention on profitability is probably resulting from the economic market conditions of the past few years, but may be a short-

term view. Customer responsiveness leads to customer retention and revenue growth. In the longer-term view, concentration on customer-facing initiatives and improvements will be significant to profitability achievement.

Companies must implement purchase recommendations based on customer requirements and experiencing higher customer retention rates. With the price of getting a new customer estimated at about ten times that of maintaining a current customer, knowing how to deliver customer value consistently and repeatedly may be the best investment a company can make (Gottschalk, & Solli-Saether, 2001).

### **5.9. Procurement: Globalizing to go to the next level of advantage**

The trend toward global sourcing and increasing use of partners for supply is set to continue, fuelling the growth of networked value chains. Driving this trend is the imperative to not only seek unit cost advantage and secure best market capabilities, but also to share risks in collaboration with partners (Davenport, 1993, Hammer, & Champy, 1993). As procurement and supplier management processes mature, they are becoming an extension along the supply chain where companies focus on continued streamlining of internal functions (internal collaboration initiatives), as well as external collaboration with suppliers and partners for joint design, planning, product management and execution. Leading companies are creating supply network transparency as they consolidate global purchases, develop global best sources, aggregate demand with external partners and leverage procurement to reshape the value chain.

Leading procurement practices include:

1. Establishing a strong procurement infrastructure to execute on strategic supply initiatives, using an empowered organization structure, fully integrated to the stakeholder and finance organization
2. Rationalization of global and regional supplier base. Supplier managed inventory and replenishment
3. Integration of sourcing and procurement (purchase, receive, inspect) through payment processes (automated reconciliation) enabled by real-time information

4. Full spend visibility and tracking
5. e-sourcing to manage request for information/quotation activities, requests for proposal and supplier awards
6. e-procurement order processing for non-strategic goods and services
7. Cash flow forecasting and control
8. Daily performance monitoring and supplier scorecards

#### **5.10. Logistics: Focusing on differentiating competencies through outsourcing**

As today's global markets continue increasing in complexity, leading companies are challenged to manage their logistics network while delivering operational excellence and high customer service levels. Distribution complexities are growing as companies compete in multichannels, while new channels (for example, Internet) expand. Innovative new technologies, such as RFID continue to emerge to enhance inventory tracking and distribution capabilities (Davenport, & Short, 1990).

Leading logistics practices include:

1. Specialized and value-added logistics services based upon customer segmentation. Outsourcing of non-differentiating activities
2. Rationalization of distribution networks and regionalization of components (facilities, processes, people and technologies)
3. Flow through or cross-docking and direct-to-store strategies. Virtual inventory and merge-in-transit strategies

#### **5.11. Performance evaluation and corrective adjustments**

Many organizations implement their strategies, but have no system in place to measure the actual performance. Kaplan and Norton developed such a measurement tool called the Balanced Scorecard is not only used for tactical or operational performance measurements, but also as a strategic management system to manage strategy over the

long run. According to Kaplan and Norton, (1997), the measurement system can be used to accomplish the following critical management processes:

- Clarify and translate vision and strategy.
- Communicate and link strategic objectives and measures.
- Plan, set targets, and align strategic initiatives.
- Enhance strategic feedback and learning.

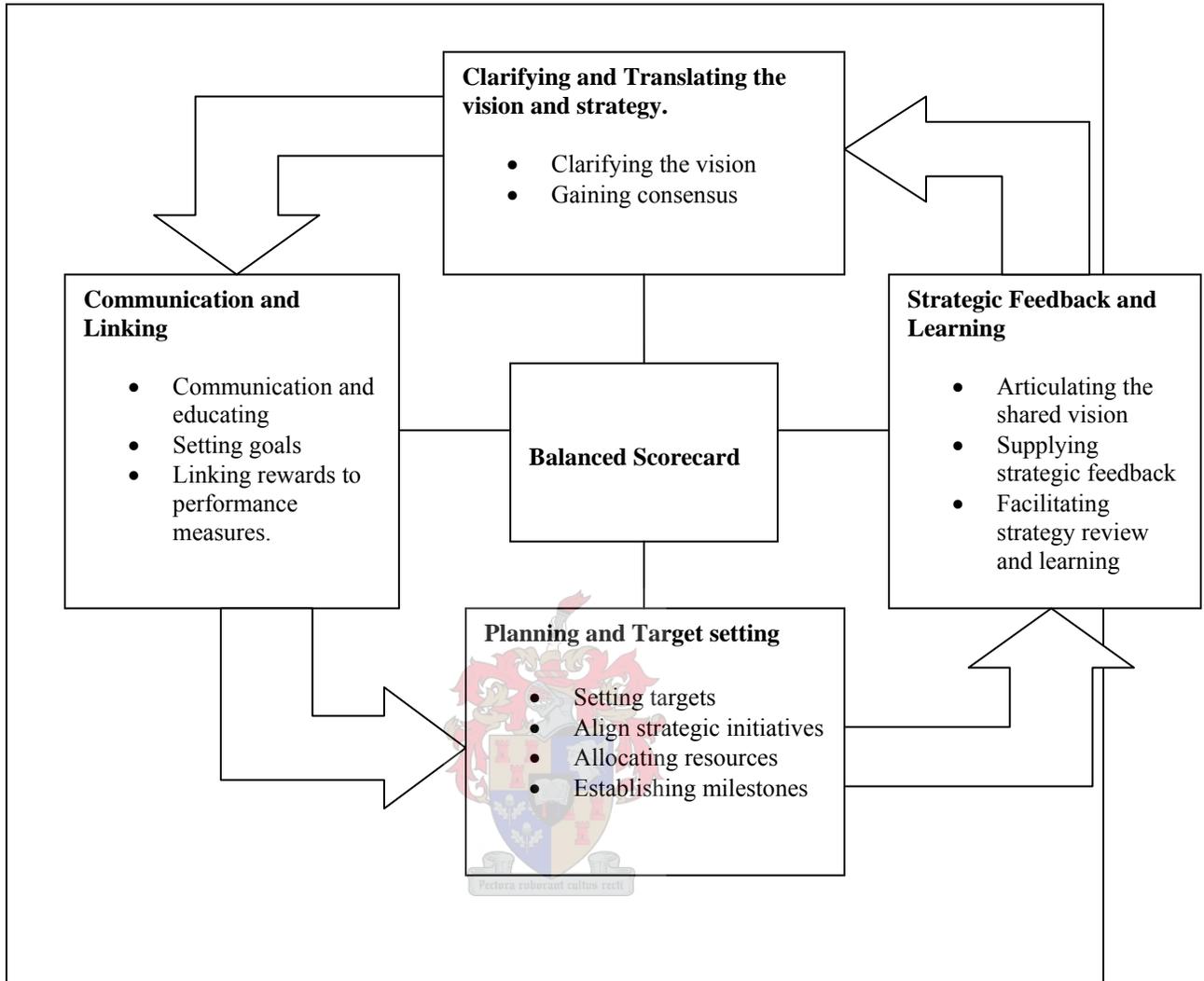
This process is further clarified through Figure....

**Clarify and translate vision and strategy.** The scorecard process starts with the senior management team working together to translate its business unit's strategy into specific strategic objectives. To set financial goals, the team must consider whether to emphasize revenue and market growth, profitability, or cash flow generation. From a customer perspective, the management team must be explicit about the customer and market segments it has decided to compete in. With the financial and customer objectives established, an organisation identifies the objectives and measures for its internal business processes. The Balanced Scorecard highlights those processes that are most critical for achieving breakthrough performance for customers and shareholders.

Communicate and link strategic objectives and measures. The Balanced Scorecard's strategic objectives and measures are communicated throughout an organisation via company newsletters, bulletin boards, videos, and even electronically through groupware and networked personal computers. The communication signals to all the employees the critical objectives that must be accomplished to succeed with the organisation's strategy.

- Quantify the long-term outcome it wishes to achieve;
- Identify mechanisms and provide resources for achieving those outcomes;  
and
- Establish short-term milestones for the financial and non-financial measures on the scorecard.

**Figure 16: The Balanced Scorecard as A Strategic Framework For Action**



Source: Kaplan and Norton (1996), 11.

**Plan, set targets, and align strategic initiatives.** The Balanced Scorecard has its biggest impact when it is utilised to drive organisational change. Managers should set targets for the scorecard measures, three to five years out that, if achieved, will transform the company. The targets should stretch the company with regards to their customers, internal-business-processes, and learning and growth objectives. Once targets for customers, internal-business-processes, and learning and growth measures are established, managers can align their strategic quality, response time, and re-engineering initiatives for achieving breakthrough objectives. The Balanced Scorecard also enables an

organisation to integrate its strategic planning with its annual budgeting process. At the time when the business sets its 3 – 5 year stretch targets for the strategic measures, managers must also forecast milestones for each measure during the next fiscal year. These short-term milestones provide specific targets for accessing progress in the near term along the business unit's long-term curve. This planning and target setting process enables the organisation to:

Enhance strategic feedback. The final management process is the learning framework embedded in the Balanced Scoreboard. The learning experience is created through the continuous feedback that the Scoreboard makes possible. Through this feedback, managers can test their hypothesis on which the strategies are based. They can therefore test to see if the strategy is actually working or not. Timely adjustment can then be made in order to keep the organisation on the proposed course. Within this exercise lies its greatest power of learning. This process of data gathering, hypothesis testing, reflection, strategic learning and adaptation is fundamental to the successful implementation of business strategy.

### **5.12 Summary**

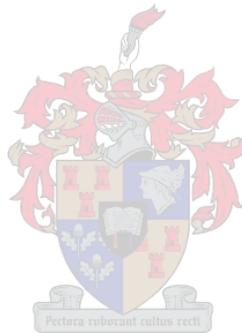
Today's business environment is rapidly and dynamically changing. Executives, managers have demonstrated that supply chain management not only concerns operational excellence and cost reduction objectives, but more and more is focused on developing new business strategies and managing new business models to outperform competition and to satisfy customers, while contributing to shareholder value.

The chapter has highlighted three major areas of focus to meet the new business agenda:

1. Profitability
2. Performance
3. Partnership

Companies that intend to transform their SCM processes and value chain networks into a competitive advantage need to excel not only in one or in two of the three focus areas, but

in all of them. The insights presented in this chapter provide a framework to begin redefining strategies, fine-tuning their performance objectives, and continuing the transformation journey of supply chain evolution towards maturity – thus, innovating the supply chain to deliver superior performance and increased profitability.



## CHAPTER 6

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 Summary

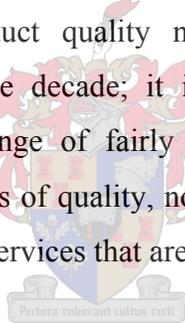
As seen throughout this thesis, companies are faced with the challenge of constantly reinventing their business models in order to be competitive in a business environment that is rapidly changing and has become unpredictable. The traditional rules of competition are deficient when dealing with fast-changing industries and business model reinvention. Systemic strategic management tools enable appropriate new business models, as well as new organizational knowledge landscapes and industries to emerge. Such tools, and their utilization, are based on a sound understanding of the dimensions and methodologies of business model reinvention, knowledge management in organizations and business networks, identification of and differentiated management in the various phases of business system evolution, and systemic scorecard (s) and organizational poise characteristics.

The study pointed out that the future will not be a continuation of the past. It will be a series of discontinuities. And only by accepting these discontinuities and doing something about them will we stand any chance of success and survival in the twenty-first century.

The exciting thing about discontinuity is that it breeds opportunity. It means that nobody owns the twenty-first century. But in order to grab hold of the future we have to let go of the past. We have to challenge and, in many cases, unlearn the old models, the old paradigms, the old rules, the old strategies, the old assumptions, the old success recipes. The fact is that in this new business environment, organizational strategic lifecycles are shorter, new business models continuously challenge existing and currently profitable ones, and unconventional thinking and imagination are the sources of wealth creation.

The organization of the twenty-first century cannot be created through continuous improvement. It can only be created through radical change. The only way to turn rigid old organizational structures into ones that allow the benefit is by abandoning the whole organizational model of the past century, along with the assumptions on which it was based. Despite the success of an existing business model, it is bound to be imitated by competitors and challenged by new business models. Therefore, a company should be able to change the rules within its industry and continuously changing the rules of the game.

Change has to do with evolving customer needs. Change has to do with evolving technologies for meeting customer needs. Change has to do with evolving managerial practices. While globalisation of many industries has created opportunities for the participants, it also brings competitive products and new alternatives that further increase the customer's expectations. Product quality no longer provides the competitive advantage that it did earlier in the decade; it is considered a qualifying factor as customers choose from a wide range of fairly equal alternatives. The customer is beginning to demand the same levels of quality, not just in the product itself but also in the delivery of that product and the services that are packaged with it.



A supply chain initiative will never succeed without the support of executive management. A problem for implementing supply chain strategies is leadership or the lack thereof. Another threat is the complexity of supply chains.

Supply Chain Management encompass three major structural changes in how companies will manage supply chain operations:

- Technology and the internet will be key enablers of innovation supply chain strategies.
- Companies will collaborate with supply chain partners and synchronise operations.
- Supply chain organizations will be restructured and re-skilled to achieve these goals.

A supply chain should be managed as a process, a continuous flow of activities, to realise its full economic potential. Supply chains will become more closely integrated entities, co-operating to deliver to the final customer products and services at the lowest cost, shortest lead-time and with the highest added value. Supply chains should ultimately be customer-focused, reconfigured to meet the demands and requirements of the final customer.

In a world where new business models rapidly supplant old business models, innovation must encompass more than product line extensions and incremental efficiency gains. Today the unit of analysis for innovation is the entire business system.

A business model must generate a total system value that is higher than the sum total value of its individual components in order for value creation to take place.

## **6.2 Conclusions**



The objectives of the study were to investigate the relevance and difference approaches in strategic innovation of business models, and especially how innovative business models can be developed by leveraging demand and supply chains in business ecosystems. In view of these objectives, extant strategic management literature, including the concepts of traditional business model, new business models, the learning approaches and tools were critically examined and reviewed. Based on this analysis, the following conclusions are made:

The pursuit of changing the rules of the game should be a perpetual process, since, with time, every innovation will eventually be imitated by competitors. Hence, before the current competitive advantages are fully exhausted, companies should already be exploiting new opportunities in the external environment and/or changing industry dynamics. The real challenge for most firms is not whether the rules of the game will change (because they will change); rather, it is will they take the initiative to do so.

Companies are faced with the challenge of constantly reinventing their business models in order to be competitive in the business environment that is rapidly changing and has become unpredictable. Although the importance of getting rid of traditional business models, traditional ways of doing business is widely discussed, it seems that both incumbents and new entrants to an industry do not know how to go about in “continuously reinventing” themselves.

A framework designed for determining the likelihood of an old industry (or business model) being substituted by a new one has been used. This framework takes into consideration the dynamics nature of business models, in which sufficient actors play proactive roles, but where somebody usually is still the focal actor and prime mover. It has been established that four factors determine the success of a new business model; taking account the acceptance of a value proposition by a large customer base, the feasibility and sustainability of the proposed new business model, the durability of a business system infrastructure, and the accessibility of technology and the co-creator’s competence. This framework can be extended to develop a systemic measurement tool for new business models.

It has been pointed out that the formulation of a clear definition of business models still deficient because of insufficient understanding of the concept of new business models from academic literature or strategic management publications.

It has been noted that, it is important to renew your business models when it comes to supply chain management, or value chain management in any industry. A supply chain should be managed as a process, a continuous flow of activities, to realize its full economic potential. Supply chain will become more closely integrated entities, co-operating to deliver to the final products and services at the lower cost, shortest lead-time and with the highest added value. Supply chains should ultimately be customer-focused, reconfigured to meet the demands and requirements of the final customer.

It has been noted that the ultimate role of the business model for an innovation is to ensure that the technological core of the innovation delivers value to the customer.

Given all the factors described within this report, it is of the utmost importance that the various factors that influence an enterprise should be taken into account, and that it should be aligned with each other in order to gain a competitive advantage. Corporate survival in today's fast changing world depends on being ahead in business model thinking and adaptation. By having a particular way to innovate in the business landscape and the company within, companies can co-evolve and co-shape customer value propositions that reinvent the company's and industry's rules. The framework developed in this paper helps managers and executives in identifying, developing, and evaluating the key dimensions of a future reinvented business models and their chances of being successful.

## 6.2 Recommendations

The following recommendations, based on the findings of this study, have been made for the application of the business models, and the impact the reinvented business models can have in demand and supply chains but also regarding further research for the advancement of theory development.

(a) The present study suggests: To deliver superior innovation of products and services, with rapid time-to-market

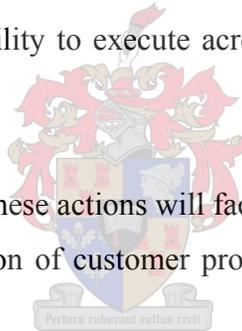
1. Create superior innovation processes of products and services to meet customer needs in collaboration with supply chain design and executive partners
2. Develop and implement solutions and systems to enable superior PLM leading practices and processes
3. Create superior capabilities for managing the evolution of the product lifecycle from launch to service to phase out in a networked value chain environment.

When successfully implemented, these actions will facilitate achieving the objectives of:

- Profitability through standardized components
- Performance by designing products/services you can manufacture and deliver to market rapidly
- Partnership by leveraging your supplier's development capabilities

(b) Demand-driven synchronization to eliminate supply chain waste (time, inventory, effort, money)

1. Implement a robust capability to sense and respond to customer demands and other critical events as they occur
2. Create superior responsiveness and cost/profit performance models to decide on the best supply response to optimize opportunities or resolve problems with speed and flexibility
3. Develop and implement the ability to execute across the networked value chain in a synchronized way.



When successfully implemented, these actions will facilitate achieving the objectives of:

- Profitability through segmentation of customer product/service strategies with pricing optimization for profitability
- Performance by implementing real-time demand information to achieve "actual" forecasts
- Partnership through collaborative planning and forecasting with customers and suppliers

(c) New customer-facing business models are required to achieve profitable global growth

1. Implement new integrated, multichannel, business models for serving the customer and responding to relentless customer pressures
2. Create supply chain execution capabilities, which provide fast, flexible, efficient and transparent response to changing customer demands

3. Develop and implement customer-driven value chain networks with demand and responsiveness driven in real-time with supply events supported by customer self-service capabilities and end-to-end supply chain visibility and decision-making.

When successfully implemented, these actions will facilitate achieving the objectives of:

- Profitability through conditioning demand based upon available supply. Pushing products and services to customer segments through up-sell, cross-sell configured order recommendations
- Performance by implementing real-time visibility and event monitoring of demand information to achieve "actual" forecasts
- Partnership through collaborative planning and forecasting with customers and suppliers

(d) Focused and variable logistics network structures and processes are required for supply chain success in today's global economy

1. Create competitive "fit for purpose" supply chain structures by focusing on differentiating competencies which support the customer value proposition and exploit the advantages of global sourcing and networked value chains.

2. To accommodate the variability brought about by customer demand fluctuations and changing requirements, develop and implement dynamic and adaptive supply chain logistics structures. Control and marshal logistics assets and virtual assets acquired through outsourcing and partnerships in real-time. Integrate the entire end-to-end global logistics network and manage event exceptions proactively.

3. Create competitive advantage through aggressive exploitation of new supply chain technologies (for example, RFID) and reduced cost of operations through new ways to deliver and finance technology infrastructure.

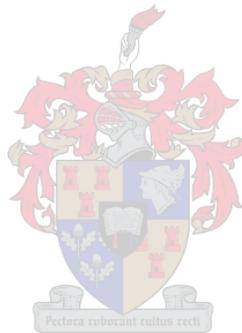
When successfully implemented, these actions will facilitate achieving the objectives of:

- Profitability by driving down fixed cost by adopting flow through strategies and reverse logistics management practices

- Performance through implementing real-time visibility and event management technologies, and RFID to manage assets and logistics event performance
- Partnership by rationalizing the logistics network and outsourcing non-differentiating activities to partners

The most challenging issue for further research regarding the development of strategic innovation of business models would be to address from academic literature and business management review, a consistent and clear definition of business models and also a measurement tool that can evaluate new business models when it comes to reinvent the traditional ones.

It is necessary to move forward with all the generic measures used in this paper because they should be further refined and empirical tested. For sure a priority must be given to business models in future research.



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