**UNIVERSITY OF LJUBLJANA**

**FACULTY OF ECONOMICS**

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# BUSINESS MODELS: THEORETICAL FOUNDATION AND APPLICATION IN E-BUSINESS COMPANIES

DOCTORAL DISSERTATION

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# POSLOVNI MODELI: TEORETIČNE OSNOVE IN UPORABA V PODJETJIH S PODROČJA E-POSLOVANJA


POVZETEK

Izraz poslovni model je bil prvič konceptualiziran že pred desetimi leti, vendar takrat precej nejasno (Mahadevan, 2000; Petrovic, Kittl, & Teksten, 2001; Timmers, 1998). (Magretta, 2002) je celo trdila, da je to med najbolj površnimi izrazi, ki se uporabljajo v poslovanju. V zadnjih nekaj letih je bilo objavljenih velio člankov, ki so se ukvarjali z izrazom poslovni model in njegovo primerjavo s podobnimi koncepti, kot je denimo »strategija«. Problem je predvsem razmejitev med vsebine in sestavnih delov poslovnega. Kot so Morris, Schindehutte in Allen (2005) opisali v svojih raziskavah, je zmeda v terminologiji predvsem med naslednjimi izrazi: poslovni model, strategija, poslovni koncept, dohodkovni model in ekonomski model, ki se pogosto uporabljajo izmenično. Zgodnji poskus Slywotzkega (1996) je definiral poslovni model kot celoto, kako podjetje izbere svoje stranke, poslovne kako diferencira svojo ponudbo, načrtuje naloge, ki bodo opravljene znotraj podjetja in druge naloge, za katere bodo angažirali zunanje sodelavce, kako organizira lastne vire, nastopa na trgu, ustvarja produkte za stranke in ustvarja dobiček. Kasneje so bile predlagane številne druge opredelitve (npr. Amit & Zott, 2001; Chesbrough & Rosenbloom, 2002; Nenonen & Storbacka, 2010; Osterwalder, Pigneur, & Tucci, 2005; Zott & Amit, 2008). Kakorkoli, Nenonen in Storbacka (2010) zagovarjata, da je raziskavovanje poslovnih modelov še vedno na začetku, , saj še vedno ni skupno dogovorjene definicije.

Dodatna literatura zadnjega desetletja poudarja elemente poslovnega modela, pri čemer uporablja različne izraze, denimo: komponente (npr. Afuah & Tucci (2000)), bloke (npr. Osterwalder et al. (2005)), podmodele (npr. Petrovic et al., (2001)), funkcije (npr. Chesbrough (2007)), značilnosti in stebre (npr. Osterwalder & Pigneur (2002)) ali preprosto elemente.

Amit in Zott (2001) v eni svojih prvih raziskav trdita, da poslovni model opisuje vsebino, strukturo in vodenje transakcij na tak način, da ustvarja vrednost z izkoriščanjem poslovnih priložnosti. Leta 2002 sta Chesbrough in Rosenbloom poudarila pomen procesa ustvarjanja vrednosti, ki vključuje ponudbo vrednosti (angl. value proposition), komu je ponujen, kako se podjetje pozicionira v vrednostni verigi in vrednostni mreži in kakšni so stroški tega Pojavile so se se dodatne definicije od Shafer, Smith and Linder (2005) in Chesbrough (2007), ki na bolj strateški nacin definirajo to temo, s poudarkom na konkurenci in sredstvih, ki so potrebna za uspeh (Johnson, Christensen in Kagermann, 2008).

Leta 2010 je predhodne raziskave na preprost način povzel Tecce. Trdi, da je poslovni model način, s katerim podjetje nudi vrednost za stranke, prepriča stranke v plačilo in s tem ustvari dobiček. Preprosto rečeno je to odgovor na: kaj kupci potrebujejo, kako to želijo in kako lahko podjetje najbolje zagotovi in zadovolji te potrebe, dobi plačilo in ustvari dobček.

Giesen, Riddleberger, Christner in Bell (2010) so podobnega mišljenja ter trdijo, da so poslovni modeli sestavljeni iz: 1. vrednosti, ki jo prejme kupec in kako jim je prodana 2. kako

se ustvarjajo prihodki, 3. kako se podjetje umesti na tržiscu ter 4. kako je vrednost dostavljena strankam

Čeprav do sedaj objavljeni članki predlagajo razlicne definicije poslovnih modelov, in se zdi, da nimajo podobne osnove, je mogoce ugotoviti podobnosti med avtorji (Nenonen and Storbacka, 2010). Prvič, večina opredelitev vključuje kreiranje vrednosti za stranko. V ozadju vsake definicije je poskus , da poslovni model pojasni, kako podjetje ustvari vrednost za svoje stranke. Drugič, prihodki so tudi prisotni v večini definicij poslovnega modela, ki poudarja, da bi moral poslovni model pojasniti, kako podjetje pridobiva dobiček iz poslovanja. Tretjič, veliko definicij poudarja pomen mreže vrednosti. Poslovni model mora tudi predvidevati, kako podjetje komunicira z zunanjimi partnerji. Četrtič, nekatere definicije omenjajo vire in zmogljivosti podjetja, ki označuje njegovo pomembnost. Nazadnje, večina definicij poslovnih modelov omenja pomembnost strateške usmerjenosti.

Na osnovi povedanega je glavni namen disertacije pojasniti pomen in vrednost izraza poslovni model v poslovnem kontekstu. Doktorska disertacija je sestavljena iz treh poglavij, pri čemer vsako od njih prispeva svoj del k znanju na tem področju. Prvo poglavje analizira izraz "Poslovni Model". Naš prvi cilj je izboljšanje razumevanja zgodovinskega razvoja terminologije, povezane s poslvnim modelom. Trdimo, da je izvor izraza poslovni model poenostavitev realnosti, ki je neizbežno povezana s tehnologijo. Obstaja namreč močna povezava med rastjo delnic v kotaciji NASDAQ delnic in uporabo izraza poslovni model. Svoje ugotovitve povežemo z obsoječo znanstveno literaturo, predvsem teorijo konkurenčne prednosti na podlagi virov in z teorijo transakcijskih stroškov, da na tak način razložimo pomen terminologije na področju poslovnih modelov. Z vzpostavitvijo jasne razlike med poslovnim modelom in drugimi izrazi iz poslovne literatue, ponudimo tako teoretičen kot praktičenpregled, kaj poslovni model je in tudi kaj ni. Na osnovi teh raziskav vzpostavimo konceptualno povezavo med strategijo, dinamičnimi zmogljivostmi in poslovnimi modeli, ki ima pomembne teoretične in praktične implikacije.

Drugo poglavje je namenjeno razumevanju, kako različni poslovni modeli za isto tehnološko rešitev vodijo do različnih rezultatov. Preučujemo hitro rastočo panoge računalništva v oblaku, predvsem tri glavne konkurente: Amazon, Salesforce and Siebel. S pomočjo študije primera analiziramo različne pristope k razvoju poslovnega modela ter njihove uspehe (oz. neuspehe) pri uporabi te nove, dinamične in inovativne tehnologije. Rezultati naše analize imajo pomembne implikacije za komercializacijo prelomnih tehnologij.

Tretje poglavje se osredotoča na enega ključnih elementov poslovnega modela ponudbo vrednosti za kupca. Preko analize študije primera Amazon.com, proučujemo, kako inovacije vplivajo na ponudbo vrednosti za kupca ". Rezultat naše raziskave je splošen okvir, ki omogoča managerjem, da bolje razumejo učinek inovacij na ponudbo vrednosti. Z namenom zagotavljanja splošne uporabnosti okvira, ga apliciramo na deset primerov uvedbe novega izdelka s strani desetih različnih podjetij.

Kljucne besede: poslovni model, ponudba vrednosti, strategija, dinamične sposobnosti, računalništvo v oblaku, prelomna tehnologija

# BUSINESS MODELS: THEORETICAL FOUNDATION AND APPLICATION IN E-BUSINESS COMPANIES


SUMMARY

A decade ago, the existing literature on Business Models conceptualized the term in a rather vague manner (Mahadevan, 2000; Petrovic, Kittl, & Teksten, 2001; Timmers, 1998). (Magretta, 2002) even argued the term was among the most sloppily used expressions in business. Furthermore, over last few years, several papers were published on the subject and many dwelt upon conceptualizing the term business model and how it compares to other managerial concepts such as strategy. The problem resides in delimiting the nature and components of a model. As Morris, Schindehutte and Allen (2005) described in their research, there is confusion in terminology, as business model, strategy, business concept, revenue model, and economic model are often used interchangeably. An early attempt from Slywotzky (1996) defined Business Model as the whole of how a company picks its customers, labels and differentiates its offerings, delineates the tasks it will perform by itself and those that it will outsource, organizes its resources, goes to market, generates utility for customers, and captures profit. Several other definitions were proposed since then (i.e. Amit & Zott, 2001; Chesbrough & Rosenbloom, 2002; Nenonen & Storbacka, 2010; Osterwalder et al., 2005; Zott & Amit, 2008). However, Nenonen and Storbacka (2010) defend that the business model research is only just emerging given that there is still no commonly agreed definitions.

Further literature came out over last decade emphasizing business model elements and authors have used different terms to describe such: components (e.g. Afuah & Tucci (2000)), blocks (e.g. Osterwalder et al. (2005)), submodels (e.g. Petrovic et al., (2001)) functions (e.g. Chesbrough (2007)), attributes, pillars (e.g. Osterwalder & Pigneur (2002)) or simply elements. Amit and Zott (2001) argue in their early research that business models depicted the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities. In 2002, Chesbrough and Rosenbloom gave more relevance to the value creation process including what value proposition is offered and to whom, how the company inserts itself in the value chain and value network, and at what cost. Additional definitions emerged such as the one from Shafer, Smith and Linder (2005) and Chesbrough (2007) that took on a more strategic view on the topic with emphasis on competition and resources necessary to succeed (Johnson et al., 2008).

In 2010, Teece summarized in a rather simplistic way past research by picturing business models as a manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit. Giesen, Riddleberger, Christner and Bell (2010) follow the same line of thought and defend business models are composed by: 1) what value is delivered to customers and how it is sold to them, 2) how revenue is generated, 3) how the company positions itself in the industry and 4) how value is delivered to customers.

Even though papers published to date propose different definitions for business models and seem to not find a congruent base, it is possible to identify similarities among the authors'

perspectives (Nenonen and Storbacka, 2010). Firstly, the majority of the definitions presented include customer value creation. It is clear that the main idea behind each definition is that business model should explain how a firm creates value for its customers. Secondly, the earnings logic is also present in various business model definitions which underlines that every business model should also explain how the firm yields a profit from its operations. Thirdly, many definitions underline the presence of the value network. We deduce that business models should also image how the company interacts with external players. Fourthly, several definitions mention the resources and capabilities of a firm denoting its importance. Lastly, the majority of the business model definitions mention the importance of a strategic orientation.

Building upon this background, the main overall research purpose of this dissertation is to clarify the meaning and value of the business model term within the business context. In order to do so, this research is composed of the three chapters, each of them with contributions to the body of knowledge. The first chapter dwells upon the meaning of the concept "Business Model". We aim at contributing to an enhanced understanding of the concept through an historical analysis of the business model terminology. We argue that the origins of the term business model are a simplification of reality with an intrinsic connection with technology. We also argue there is a correlation between the rise of NASDAQ stocks and the use of the business model terminology. We further correlate our findings with the extant business literature, specifically the resource-based view and the transaction cost economics in order to explain the meaning of the business model terminology. By establishing a clear distinction between the business model and other terms within the management literature, we provide both scholars and practitioners with a rich overview of what constitutes a business model and what does not. Based on those findings, we draw a conceptual correlation between strategy, dynamic capabilities and business models with both high theoretical and practical implications.

The second chapter aims at understanding how different business models applied to a same technology lead to different outcomes. We study the fast growing cloud computing industry and three major players competing within it: Amazon, Salesforce and Siebel. Through a case study, we analyze the different business model approaches and their successes (or failures) in capitalizing on this new, dynamic and innovative technology. Several managerial implications concerning the commercialization of disruptive technology emerged as a result.

The third chapter focuses on one of the key elements of the business model: customer value proposition. Through a case study analysis of Amazon.com, we study how innovation affects customer value proposition. Resulting from this study is a generalizable framework that enables managers to better understand the impact innovations on customer value proposition. In order to assess generalizability, the framework is applied to ten different products launches from ten different companies.

**Keywords:** Business Model, value proposition, strategy, dynamic capabilities, cloud computing, disruptive technology.

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# INTRODUCTION

## BACKGROUND AND RESEARCH CONTEXT

Managers, entrepreneurs and information systems management scholars have an intuitive understanding of how business works and how value is created. Simply put, they have an intuitive understanding of companies' business models (BMs). Even though business models influence all important decisions made by a company, in many cases managers are unable to communicate and explain it in a clear and simple way (Linder & Cantrell, 2000; Magretta, 2002). In fact, the term has become a buzzword used by managers, academics and journalists to describe everything and nothing, ranging from the US national economy to anything driven by ICTs. With much confusion in the literature and several attempts to define what a business model is, I questioned what could be my added value to such a "red ocean" research topic.
Therefore my research goals were beyond bringing a universally accepted definition for the term. Rather, I was more interested in its nature and direct influence on business outcomes. From this research resulted three papers, all published in reputable journals and some of which I have high expectations in terms of impact in the field.

## RELEVANCE AND RESEARCH GOALS

Clearly the Internet and other ICTs are here to stay and have an enormous impact on business worldwide. One of the major benefits of ICTs are their ability to multiply possible business designs due to reduced coordination and transaction costs (see Coase (1937) and Williamson (1975) as seminal works on transaction costs) that allow increased value propositions and innovative revenue streams (for more details see section 1.2.1 in Chapter 1). In fact, several authors argue that business models are the answer to the added complexity brought by ICTs (Chesbrough & Rosenbloom, 2002; Afuah & Tucci, 2000; Applegate, 2001; Pateli & Giaglis, 2003).

This dissertation is part of a research stream on business models and focuses on a specific area not so well covered until now: understanding the origins, differentiating, conceptualizing and applying business models. While business model research predominantly stays at a non-conceptual, broad and sometimes even vague level, this work attempts to bring more clarity to business model research. A clear understanding of business models is crucial if one does not only want to provide simple management concepts, but also effective tools and frameworks able to assist managers in a rapidly moving, complex and uncertain business environment.
The main research question of this dissertation is:

*What are business models, where do they fit within the literature and how can they be defined and applied in order to generate a strong foundation for subsequent research and help*

*researchers and practitioners to better understand the role and place of business models within their organizations.*

This dissertation goal is to tackle the business model terminology in order to build a foundation for further research on the topic and generate tools with high implications for practice. The conceptual framework provided in this dissertation aims at understanding better the relationship between strategy, dynamic capabilities and business models.

The research goals of this dissertation can be summarized as (1) a conceptual framework that positions the business model within the management literature and assists managers express the business logic of a firm in a structured way (see section 1.4. in Chapter 1), (2) an expression of how different business models within a same industry yield different outcomes (Chapter 2) and (3) a tool to assist business model creation or modification (see section 3.4. in Chapter 3).

**OPERATIONALIZATION**

We operationalized our research according to the three research goals. In order to build a conceptual framework that clearly positions the business model within the management literature, we based our rational on a strong literature review. We started by researching the origins of the business model terminology (see section 1.2.). We then provide a theoretical grounding for it rooted in its historical evolution (see section 1.3.) and clearly define how a business model distinguishes itself from other terms in management in general and information systems management in particular (see sections 1.4. to 1.8.). From this analysis emerged two conceptual frameworks (see Figure 1.2. and 1.3.) that position the business model within the literature and helps managers express the business logic of a firm through an innovative framework.

The second research goal of this dissertation dwells with understanding how different business models within a same industry lead to different outcomes. Through case analysis, we analyzed three companies within the cloud computing industry (Chapter 2). We explore the contribution of the various business model elements to either success or failure of three technology based companies. Through the business model lens defined by Nenonen and Storbacka (2010), we support our arguments based on a triangulation of academic literature, newspaper articles, corporate reports, among others.

Finally, the literature review on business models reveals that "value proposition" is possibly the most important element of any business model. Value proposition aims at providing focused and distinct benefits that help solve target customers' problems by being distinctive (i.e. superior to those of its competitors), measurable (i.e. based on tangible points of difference) and sustainable (i.e. valid for a certain time period) (Anderson et al., 2006).

Through an embedded case study based on Amazon.com (Chapter 3), we created a framework that helps companies identify the key factors that can give their prospective customers enhanced value proposition (see section 3.4.2.). Furthermore, the framework was applied to ten different products or services in order to assess their customer value proposition and associated success / failure on the marketplace (See section 3.6).

## CONTRIBUTIONS OF THIS DISSERTATION

Based on the above, the goal of this dissertation is to bring clarity and strong foundations for future business model research and applications. This is achieved by nine major contributions:

1. Study of the origins of the business model terminology.

2. Review and assessment of past interpretations of the business model terminology by major scholars in the field (i.e. Casadesus-Masanell, Ricart, Osterwalder, Zott, Amit, among others).

3. Answering the question: Is the term "business model" simply a management fad or does it has a distinctive place within the literature?

4. Providing theoretical foundations that justify the origins and evolution of the term within the literature.

5. Clearly distinguishing the "business model" terminology from other often misused terms within the literature such as strategy, revenue model, business process modeling, among other.

6. Creating a conceptual framework that positions the business model within the literature.

7. Expressing the relationship between business models and disruptive technology through a case study of the cloud computing industry.

8. Uncovering the fundamental aspects in new product introduction and innovations that contribute toward customer value proposition (the core element of any business model).

9. Providing a practical tool to improve managers' decision making concerning new product introductions / innovations.

10. Providing avenues for further research that build upon our findings and frameworks.

## STRUCTURE OF THE DOCTORAL DISSERTATION

The dissertation is composed of three major chapters and some concluding remarks pertaining to the whole dissertation found in Chapter 4. Each major chapter investigates business models or one of its core components. The first one is considered the major theoretical contribution of the dissertation. It defines, justifies and positions the term business model within the literature. Resulting from this research is a framework that correlated strategy, dynamic capabilities and business models. The second chapter examines how three technology based companies (Amazon.com, Salesforce.com and Siebel) responded to the disruptive power of the cloud computing technology through distinct business models. The third chapter studies how past Amazon.com' innovations enhanced or hindered customer value proposition – a fundamental pillar for business model generation. Resulting from this study is a five perspective framework with high managerial implications.

The first chapter exposes how the term "business model" has been misinterpreted and misused over the years, resulting in it being inadequately understood and applied by both practitioners and scholars. We further expose how it is frequently confused with other popular terms in the management literature such as strategy, business concept, revenue model, economic model or even business process modeling. Overall, our findings suggest that while business model describes what an organization currently is, it needs to be complemented with a strategy and capabilities in order to face upcoming changes. Besides clarifying the meaning and use of the business model terminology, we theorize about its roots through a combination of the resource-based view and transaction cost economics. Finally, we identify new avenues for further research such as the investigation of path dependency in a business model and the meaning of business model innovation.

The second chapter argues that a proper business model is crucial for the successful commercialization of disruptive technologies. Through the study of the cloud computing industry, we explore the strategic contribution of the various business model elements to either success or failure. We examine how Amazon.com, Salesforce.com and Siebel responded to the disruptive power of the cloud computing technology. We show that an incumbent's reaction to a disruptive change would require an adjustment to the whole business model, not just a few elements. In contrast, new entrants can leverage their newly created business models and adapt quickly to a new market or technology. Our findings have direct implications for strategic managers and entrepreneurs seeking to leverage existing or upcoming disruptive technologies through the right business model.

The third chapter is a single embedded case-study based on Amazon.com aimed at advancing the theory on value proposition - considered by many scholars as the most important element of a business model. This chapter seeks to advance the theory on value proposition and innovation by offering a framework for identifying elements that either enhance or hinder customer value proposition. The result of the study is a five perspective framework entitled

PERFA: performance, ease of use, reliability, flexibility and affectivity. The findings of this research provide managers with guidance on how to uncover innovative value propositions and potentially create new business models that reflect such. We conclude this chapter by applying of the PERFA framework to ten different cases.

Although each chapter is made of an introduction and a conclusion, concluding remarks are made at the end of the dissertation followed by the list of references used.

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# Chapter 1: BUSINESS MODEL: WHAT IT IS AND WHAT IT IS NOT[1]

Abstract: The term "business model" has been misinterpreted and misused over the years, and it has consequently been inadequately understood and applied by both practitioners and scholars. It has been frequently confused with other popular terms in the management literature such as strategy, business concept, revenue model, economic model or even business process modeling. This paper aims to contribute to clarify the meaning and use of the business model image as well as to theorize on its logical underpinnings that we find rooted in the resource-based view and in the transaction cost economics. This paper identifies new venues for further research such as the investigation of path dependency in a business model and the meaning of business model innovation.

*"While the term 'business model' has gained widespread use in the practice community, the academic literature on this topic is fragmented and confounded by inconsistent definitions and construct boundaries"* (George & Bock, 2011, p. 83).

## 1.1. INTRODUCTION

Over the past two decades, the term "business model" has frequently been misused by both academics and practitioners. It is common to hear the term being used by managers, consultants or scholars from diverse fields and even in the popular media. The term's pervasiveness and use suggest that business models are extremely important; however, no consensus regarding its meaning has been established. At times, it seems that the term's main purpose is to help consultants sell their services and for scholars to write case studies attributing the failure of e-business companies to "improper business models". The term business model often appears to encompass everything from, among others, strategy, economic model and revenue model. Although several papers have critically examined certain aspects of business models (Casadesus-Masanell & Ricart, 2010; Morris et al., 2005; Zott & Amit, 2008; Zott et al., 2011), the strategic management community has ultimately struggled to agree on a clear role for the business model in theory and practice.

Several important aspects require further investigation. First, the reasons that the term business model has gained prominence with regard to Internet companies are unclear; another closely connected question is the relevance of the business model terminology to brick-and-mortar companies. Second, the relationship between business model and other similar terms (e.g. strategy, economic model, revenue model) remains fuzzy at best. A clear distinction between business model and other terms is required in order to demonstrate whether the term is simply a management fad or has a firm place in the management literature and practice.

[1] The chapter is based on DaSilva, Carlos; Trkman, Peter: Business Model: What It Is and What It Is Not. Long Range Planning. In press.

Third, the connection of the term business model to the theories most often used in management (e.g. the resource-based view (RBV)) also seems unclear. Hence, the term's validity and its role in the strategic management literature can only be vaguely explained.

Over time, the term business model has suffered in two main ways: first, it has evolved into an unclear idea with a cannibalizing tendency towards other management terms such as strategy and, second, several companies in the 1990s were led to a poor performance and ultimately bankruptcy as a result of following what were presumably innovative business models. It is time to relearn what the term business model encompasses and prove its relevance and utility to both the academic and the business community.

Our paper thus examines the business model terminology through four main lenses. First, we focus on the term's historical development ranging from its origins, developments and the hype that has distorted its meaning. Second, we provide a theoretical foundation for the business model using the resource-based view and transaction cost economics as its basis. Third, a consistent statement is made as to what a business model is and is not, as well as the conditions in which a business model is an attractive and meaningful managerial philosophy. Fourth, implications for further research are outlined based on our analysis and findings.

### 1.2. BUSINESS MODEL – THE ORIGIN

The term business model was first mentioned in an academic article in 1957 (Bellman et al., 1957). The article investigates the construction of business games for training purposes. The term is mentioned just once: "And many more problems arise to plague us in the construction of these business models than ever confronted an engineer" (p. 474). The meaning of business model seems intrinsically connected with a representation of reality, a simulation of the real world through a model.

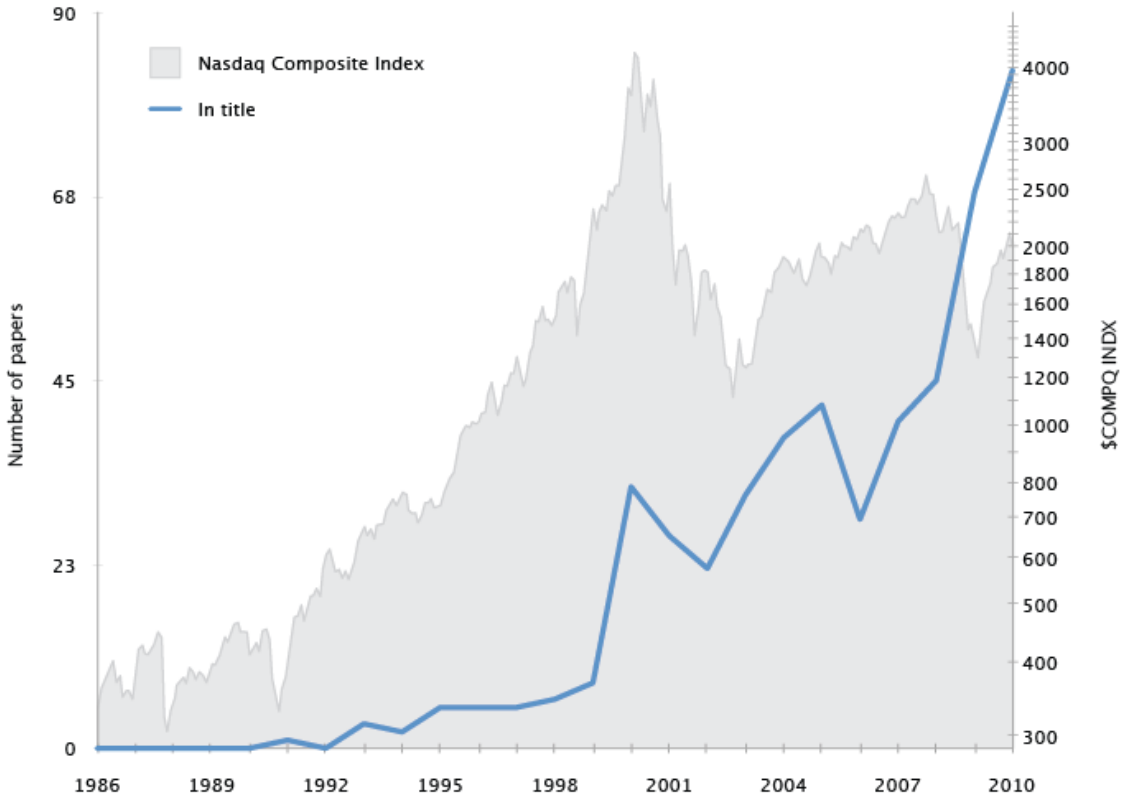
Jones (Jones, 1960) wrote the first academic article using business model in its title. The article raises questions about how college students from the business field should be trained and how technologies should be introduced to them. No mention of the term "business model" is made in the text itself, revealing the term's arbitrary use in the title. Thus, the origin of the term reflects a simplification of reality aimed at educating future managers on technology.

The term did not see widespread use for decades. The number of peer-reviewed journal papers on "business model" remained low until the 1990s with only five papers containing the word "business model" in their title over the whole decade (as reviewed by Osterwalder, Pigneur, and Tucci (2005)). With the development of information and communication technologies (ICT) and the emergence of Internet companies the term quickly gained prominence among both practitioners and business scholars. Congruently, the use of the term business model in academic papers closely followed the trend of the NASDAQ index from the early 1990s to the dot-com bubble burst. Ghaziani and Ventresca (2005) further acknowledge that, during this

period, the business model terminology spread to various communities (such as marketing, management, banking and ICT) and has been used within various frameworks (such as business plan, business strategy, value creation, globalization and organization design).

Figure 1.1 shows the number of papers with "business model" in either the title or as a topic appearing in journals indexed in Web of Science. Web of Science was chosen since it offers a reliable coverage and historical overview at the journal, article and cited-reference level (Norris & Oppenheim, 2007).

*Figure 1.1: Number of papers published on business models vs. the NASDAQ trend*




*Source: Data from Web of Science (from 1986 to 2010) and Nasdaq Composite Index (from 1986 to 2010) from Google Finance*

In a nutshell, the widespread use of the business model terminology seems to be intrinsically connected with technology-based companies. Business models seemed to be the answer for explaining how innovative undertakings dealing with technology or any other form of unclear but potentially profitable concepts, foreign to the logic of traditional industries, were materialized in business terms. In fact, Internet companies could not be valued based on their past performance since there were no precedents. As a result, investors speculated about the compelling future promise based on innovative business models (Thornton & Marche, 2003).

An emblematic example is Pets.com. While its huge spending on advertising brought enormous brand awareness, it became a company that everyone knew about but nobody was interested in what it was selling. It overestimated the market trend and assumed its spending would be followed by astonishing revenues. Despite the lack of financial soundness, the company attracted investments amounting to USD 300 million in less than two years. Expenses rapidly overwhelmed the company and investors demanded a return. Stock prices went from USD 11 per share in February 2000 to USD 0.19 on the day of its liquidation a few months later. This example clearly demonstrates how the company's business model was used as a justification for its stratospheric valuations, a mistake common to several other dot-com companies of the time (Garfield, 2011).

Another example is the company Kozmo.com which guaranteed its customers free delivery with no minimum purchase amount for all sorts of items ranging from Starbucks coffees, DVDs to a pack of gum. They believed that the expensive delivery costs would be offset by the savings they would gain from not having a retail space open to the public. In 1999, one year after its launch, the company had USD 3.5 million in revenue and a net loss of USD 26.3 million. Despite this apparent discrepancy, the company was able to raise USD 280 million from investors throughout the 2.5 years of its existence before its eventual bankruptcy (Ackman, 2001).

The fact that the term business model propagated together with the rise of NASDAQ stocks may show that (innovative) business model was initially just a buzzword. The business model terminology hid the otherwise evident lack of strategy and poor revenue models of companies with fast growing stock prices but low or even non-existing profits.

However, the term business model survived the dot-com bubble. The number of papers with "business model" in their title remained relatively stable between 2004 and 2007 at 25–42 papers annually. Interestingly, it began to grow again with 45, 68 and 83 papers in 2008, 2009 and 2010, respectively. A closer look at this trend reveals that the 2004–2007 stream of papers was characterized by a change in focus from the business model of Internet companies to the analysis of business models in "general business". As the Internet and ICT had revolutionized the way companies do business in virtually all industries, the business model term quickly spread to the analysis of brick-and-mortar companies. Companies from industries such as

airlines (Lawton & Solomko, 2005; Procter, 2005; Tretheway, 2004) and music (Manafy, 2006; Procter, 2004; Swatman et al., 2006) are some of the most thoroughly analysed cases. Further, the growth of business model literature in recent years can also be attributed to papers on business models outside the business sphere. The term has also been used as a buzzword to analyse basically any kind of human endeavour with a wide range of interpretations (Ghaziani & Ventresca, 2005). Authors have discussed the business models of terrorist organizations such as Al-Qaeda (Vardi, 2009), political parties such as the Labour Party in the UK (Faucher-King, 2008), the possibilities to preserve nature (Sovinc, 2009) and the development of rare diseases (Ferry, 2010). The term is even used in macroeconomics to discuss the model of the US economy (Cappelli, 2009).

The question remains whether business model can become a defined and established concept in the literature in the long term. What now follows is an assessment of whether the term business model provides relevant insights to both business scholars and practitioners.

### 1.2.1. Reasons for the existence of the term "business model"

Understanding how business works and how value is created for different stakeholders has become the shibboleth of management scholars in recent years. Millions of dollars were raised to fund flawed "business models" during the dot-com era (Shafer et al., 2005). However, the problem does not lie with the term itself but with its lack of understanding and misuse. If a business model's core stands on untested or speculative assumptions about the future, the firm is doomed to an uncertain outcome. For example, Pets.com assumed that its extravagant marketing expenses and consequent brand awareness would be offset by large amounts of purchases. Such efforts reached a certain mass and the general public was aware of the Pets.com brand, but only a fraction of those were pet owners and, of those, only a few were willing to order pet-related products online. In addition, several products the company sold were retailed at a price lower than the acquisition costs. As a result, Pets.com was losing money on nearly every order. It believed that, by building a large customer database, it could raise prices later on in order to offset its initial losses. The reality was that customers were price-sensitive and could easily drive to their local grocery store and buy pet-related products there instead of ordering them online and waiting several days for delivery. Those assumptions took the company from being IPO-listed on NASDAQ to liquidation in less than nine months. Non-targeted marketing allied with bad management, high transaction costs and poor strategic decisions led the company to excessive debt and consequent closure. CNET even considered this to be one of the greatest dot-com failures in history (Wolverton, 2000).

A milestone in proliferation of the term's use was the disruptive changes motivated by new technology such as ICT in general and the Internet in particular. The sophistication of technical and organizational networking enabled not only a broader range of business networks and business strategies to emerge, but also faster adaptation to innovations. As a result, the Industrial Age way of doing business became woefully inadequate to meet the

imminent challenges of the Information Age (Skerlavaj et al., 2007; Venkatraman & Henderson, 1998). Hamel (2002) even attributed the high capitalization levels seen in Silicon Valley throughout the 1990s to the emergence of innovative business models more than to the talent of their brilliant visionaries. Further, Afuah (2004) perceives business model as the core reason behind the creation and success of corporations such as Microsoft, Wal-Mart, eBay or Southwest Airlines.

Likewise, many consultants and business publications have adopted the business model terminology in reference to firms' ways of doing business (see Gilbert et al. (2003); Johnson (2010); Kim & Mauborgne (2005); Schwalm et al. (2009)). Finally, a growing number of consulting companies have been offering services in the field of business model innovation and creation, such as McKinsey & Company, Bain & Company and the Boston Consulting Group. Congruently, in its 2008 "Global CEO Study" IBM revealed that companies from a broad range of fields and industries were actively seeking advice on how to innovate their existing business models (IBM Global Business Services, 2008).

Thus, it is clear that there is a large discrepancy between the high level of importance attributed to the term business model by practitioners, consultants and researchers and the low level of clarity of its meaning. The fuzziness associated with the term led renowned scholars to even question its added value within the management literature. For example, Porter (2001) described the business model approach to management as an "invitation for faulty thinking and self-delusion" (p. 73). Is business model simply a term to explain the high capitalization of dot-com companies, justify new consulting projects, and enable the easier publishing of academic papers given its hype nature? Or does it have a legitimate place in the management literature? We thus attempt to sharpen the conception of what a business model is not, and what it is.

### 1.3. THEORETICAL GROUNDING

The business model term may have gained predominance among the academic and business communities, yet this does not prove its added value for research and practice. Dozens of definitions and component breakdowns of the business model have been proposed over the last decade (Amit & Zott, 2001; Casadesus-Masanell & Ricart, 2010; Chesbrough & Rosenbloom, 2002; Johnson et al., 2008; Magretta, 2002; Morris et al., 2005; Osterwalder & Pigneur, 2010; Teece, 2010; Zott & Amit, 2010). Thus, our aim is not to provide yet another business model description or a more precise identification of the components that form a business model. Rather, we propose a theoretical grounding focused on understanding the practical nature of the business model term and the conditions in which the business model terminology is appropriate.

Any theoretical grounding should be able to explain both the observed trends receiving scholarly attention as well as establish a clear distinction among existing terms within the

literature. Common ground for business model research is necessary due to the current disparity of approaches in terms of the concepts used and phenomena explained (Zott et al., 2011). Unspecified theoretical expectations or a lack of theoretical knowledge may otherwise lead researchers to replicate pre-existing findings, adding little to existing theoretical knowledge, or to produce massive amounts of data without any clarity with respect to how that data can lead to novel insights (Andersen & Kragh, 2010).

### 1.3.1. The Resource-Based View and Transaction Cost Economics Perspective

While the resource-based view (RBV) has permeated much of the research on business models, most articles published on the topic framed within the RBV do not delineate how the business model terminology differs from other popular terms such as strategy (George & Bock, 2011). Models of any kind (including business models) implicitly or explicitly address the internal competencies that underlie a firm's competitive advantage (Morris et al., 2005). This line of thought is consistent with the RBV where the firm is viewed as a bundle of resources and capabilities (Barney, 1991). A typical example of using the RBV to explain the business model term is presented in Hedman and Kalling (2003) where Ikea's business model is exposed through resources such as design skills, supplier relations, sourcing networks and cultural factors like strong commitment and leadership.

While relevant, the RBV alone cannot explain the complexity of business models or its prominence in recent years. Resources *per se* do not bring any value to customers; value is generated through the transactions made with the use of resources. For example, a technology (resource) alone has little to no value (Chesbrough, 2007). Firms are required to deploy such technology through transactions in order to create value. We thus agree with McIvor (2009) who emphasized the importance of combining the RBV and the transaction cost economics (TCE) theories. As business value is created from unique combinations of resources, TCE identifies transaction efficiency as a source of value (Morris et al., 2005). Supporting these findings, we argue that business models represent a specific combination of resources which through transactions generate value for both customers and the organization. *Ergo*, Ryanair's business model can be interpreted as a combination of resources (e.g. non-unionized workforce, standard-plane fleet) and the way they are deployed through transactions (e.g. online ticket bookings).

The logic behind our choice of those two theories follows Schumpeter (1934) theory of economic development which argues, among others, that value is created from a unique combination of resources, while TCE recognizes transaction efficiency and boundary decisions as a source of value (Morris et al., 2005). Similarly, previous research has revealed that the theoretical underpinnings of the RBV and TCE are common among practitioners for the purpose of creating a business model (Amit & Zott, 2001; George & Bock, 2011).
This theoretical grounding provides us with a strong background for assessing how the understanding of a business model has formed and shaped over time. For example, it explains

why the term business model was originally prominent among Internet companies. Since one of the main roles of the Internet and e-business was to dramatically reduce transaction costs (Bunduchi, 2008; Mahadevan, 2000), several competing ways of organizing a business were made possible at similar costs. Thus, with the advent of the Internet the choice of a suitable way of organizing business activity is much wider these days than ever before. For example, Nokia's telecommunication business model in the early 1990s was straightforward. As the first handheld phones came out, the company focused on organizing its key resources in order to manufacture Nokia devices on a large scale. At the time, the possibilities of partnerships and additional revenue streams were limited and standard among the industry.

Today, business model possibilities within the telecommunication industry are enormous. New and innovative ways of doing business are being discovered at a faster pace than ever before. Thus, advances in technology allow mobile phone manufacturers to generate revenues not only from the sale of their handsets and associated accessories, but also from several other sources. As the marginal costs of conducting transactions in a digital world are close to zero, mobile phones have become a billion dollar distribution channel where thousands of digital products such as music, movies, photos, software and games are purchased and consumed instantaneously.

The inherent advantages of the Internet (a dramatic reduction of transaction costs) have progressively spread into virtually all industries, including traditional brick-and-mortar companies. Ryanair, for example, took advantage of the existing technology to eliminate intermediaries in ticket sales while acting as an intermediary in hotel and rent-a-car bookings. Not long ago, it was essential for a customer to walk into a travel agency to book their travel arrangements. The price the customer paid would reflect multiple fees ranging from the travel agency commission to the actual airfare. Airline companies depended on agencies to sell their tickets and vice-versa. The revenue distribution and stream were set and only limited possibilities for innovation and growth were available. These days all of this can be done at home with the click of a mouse or touch of a screen. Airlines can even go to the extreme case of selling plane tickets below their marginal cost as they have established alternative revenue streams through online sales that compensate for that loss (i.e. the online sale of hotel rooms, car rentals, city-airport transfers). Without the Internet, the cost of doing so would be prohibitively high.

In a nutshell, the way companies operate in the 21st century is open to an unprecedented range of possibilities. The term business model has accompanied this evolution and gradually found its place among the academic literature. By studying the roots of the terms and building upon the RBV and the TCE, we argue the core of a business model is defined as a combination of resources which through transactions generate value for the company and its customers.

While theoretically grounded, our rationale for the business model does not distinguish it from other popular terms within the management literature (George & Bock, 2011). In the

following sections, we will reveal how our theoretical underpinning of the term business model relates, complements or even substitutes other concepts.

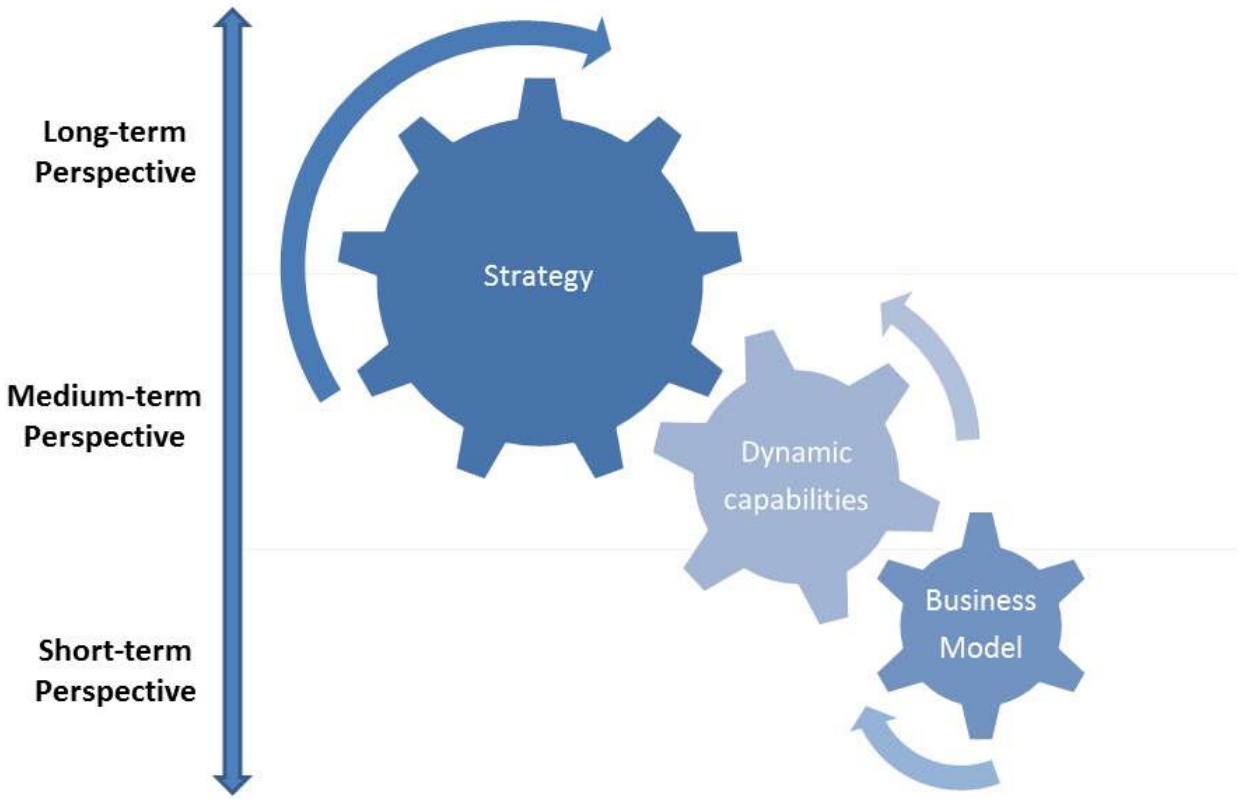
### 1.4. STRATEGY

Porter (2001, p. 71) describes strategy as "how all the elements of what a company does fit together". On the surface, this definition appears to be parallel to that of business models: "a system, how the pieces of a business fit together" (Magretta, 2002, p. 6). Indeed, several scholars have dwelled upon understanding the difference between strategy and business models, with several opinions emerging (Casadesus-Masanell & Ricart, 2010; Ghaziani & Ventresca, 2005; Magretta, 2002; Porter, 2001; Seddon & Lewis, 2003). We argue that business model differs from strategy in two different ways.

First, by building on Casadesus-Masanell and Ricart (2010) who state "business models are reflections of the realized strategy" (p. 204), we argue that strategy shapes the development of capabilities that can alter current business models in the future. Strategy is about building dynamic capabilities aimed at responding efficiently to future and existing contingencies (Ambrosini & Bowman, 2009). Dynamic capabilities are defined as the capacity to anticipate, shape, seize opportunities and avoid threats while maintaining competitiveness by improving, combining, protecting and, when deemed necessary, re-arranging the company's intangible and tangible assets (Teece, 2009).

Figure 1.2 represents our first framework. We argue that strategy (a long-term perspective) sets up dynamic capabilities (a medium-term perspective) which then constrain possible business models (present or short-term perspective) to face either upcoming or existing contingencies. Thus, strategy entails devising dynamic capabilities able to respond to contingencies through the organization's business model. Business models are then bounded by the firm's dynamic capabilities.

*Figure 1.2: Generic Framework*



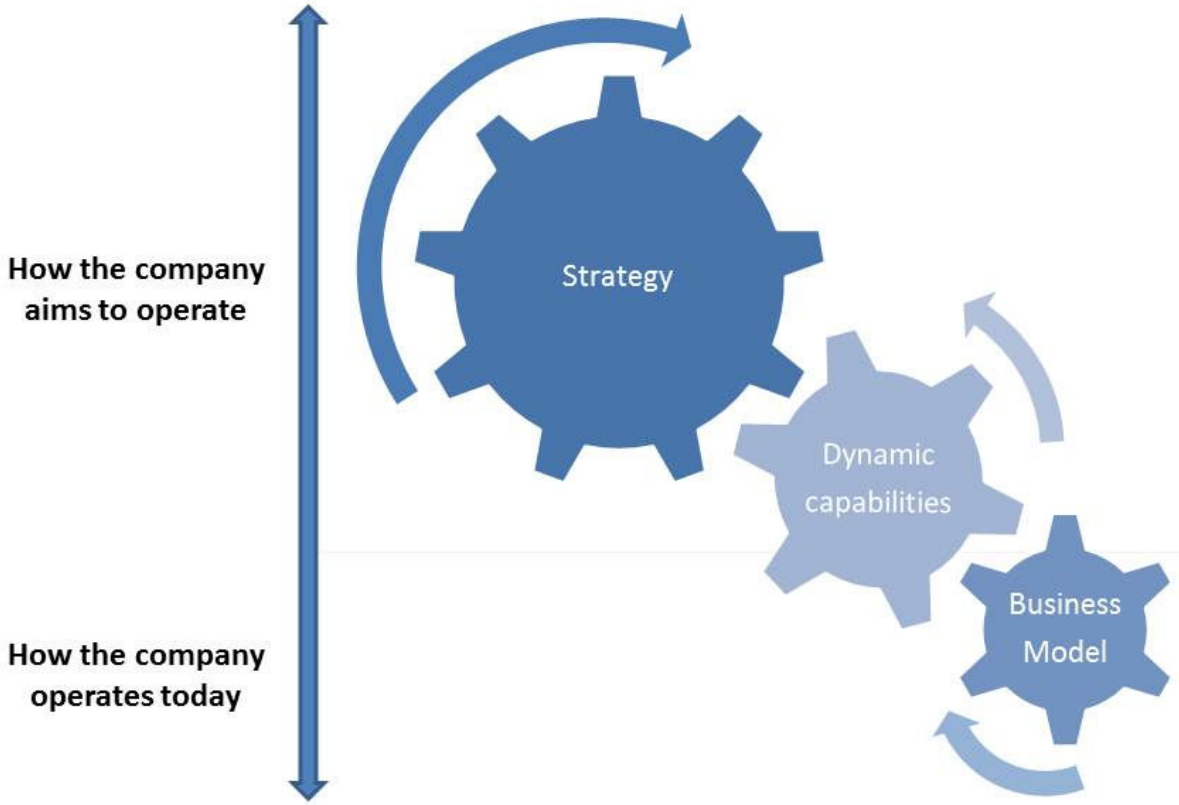
For example, a contingency Ryanair might consider is the possibility of a major European airline going bankrupt in the near future. As a result, Ryanair could strategically prepare itself for this contingency not by changing its current business model but by developing the dynamic capabilities required to take advantage of that opportunity should it arise.

This argument is in line with our theoretical grounding where the TCE offers a rationale for the potential benefits associated with acquiring excess resources and highlights the circumstances in which such resources can be better spun off from the company (Silverman, 1999). Clearly, Amazon and its cloud computing business can explain such a rationale. While developing the best possible dynamic capabilities to service its present and future needs (computing capabilities able to support its growing online retail business and associated peaks in demand), Amazon saw a strategic opportunity to build upon its overcapacity in order to service other companies. The development of excessive dynamic capabilities represented a strategic decision to move away from its initial business model. This resulted in a new set of strategic options and visionary business opportunities that led Amazon to become one of the key players in the cloud computing industry (Clayton, 2011).

Second, while we concur that "every organization has some business model" and "not every organization has a strategy" (Casadesus-Masanell & Ricart, 2010, p. 206), we further emphasize that strategy reflects what a company aims to become, while business models describe what a company really is at a given time (Figure 1.3.).

To cement all three concepts, consider once again the low cost airline Ryanair. The company's strategy is clear: reduce the perceived fare price to the lowest possible compared to other airlines in order to attract customers. This strategy has led the company to carefully devise dynamic capabilities such as a strong bargaining power with airports (Barrett, 2004), aircraft suppliers (Ruddock, 2007), staff (Hoffmann, 2007) and an experienced legal department able to respond to lawsuits associated with their strategic goal (Carey, 2011). As a result, Ryanair's existing (or lack of) dynamic capabilities allow (or restrict) the company's ability to take advantage of opportunities through the transformation of its business model. Thus, Ryanair's business model refers to the combinations of resources (i.e. a standardized airline fleet) and consequent transactions (i.e. bookings not allowed though third party websites to minimize transaction costs) that generate value for both customers (i.e. low fare prices) and the company (i.e. low variable costs).

*Figure 1.3: Generic Framework 2*



## 1.5. BUSINESS CONCEPT

The academic community has acknowledged that the status and origin of the whole idea of a business concept term is ill-defined, calling for greater conceptual clarity and rigor (Lindman, 2007). A review of the literature reveals several similarities between the terms business model and business concept (see e.g. Hedman & Kalling (2003). In fact, earlier authors used both terms as synonyms without bothering to clarify the distinction between them. Business model is described as the "way of doing business" or its "business concept" (Hamel, 2002; Voelpel et al., 2005). Others would argue that the business concept precedes the business model without giving a clear explanation: "… the development of new business concepts and the establishment of corresponding business models" (Lindman, 2007, p. 196).

We argue that the business concept is any conceptualization of business reality, such as the business itself along with a company's strategy and business model. This is in line with Applegate and School (2001) who defined business concept as any of the following: 1) a business market opportunity; 2) the products and services offered; 3) competitive dynamics; 4) a strategy to obtain a dominant position; and 5) a strategic option for evolving the business. Ryanair's business concept could be defined as: "A no frills airline company that offers point-to-point flights and aggressively lobbies in order to offer the lowest possible fares to its customers while maximizing its income through ancillary revenues".

While researchers seem to be approaching a consensus on what a business model is, the business concept seems to remain fuzzy exactly due to its broadness. A typical example is the paper by Pynnonen and Kytola (2008) which somewhat hazily exposes the "business concept innovation process".

Against this backdrop, we believe the term business concept will progressively disappear from the academic literature and make way for an increasingly more rigorous alternative term – the business model

## 1.6. REVENUE MODEL

The term business model has often been confused with revenue model (George & Bock, 2011). Defined as the specific mode in which a business model enables the generation of revenue, a revenue model describes the revenue sources, their volume and distribution (Amit & Zott, 2001; Ibrahim, 2006). A revenue model is viewed as an important element of a business model, defined as the means by which value is captured by a firm (Zott & Amit, 2006). Therefore, a revenue model alone does not define how a company creates value in its entirety, but solely how revenue is appropriated by the firm through the sale of its goods or services. Put briefly, having a revenue model does not in itself define a company's business model, although it is clearly an important component of a business model.

Ryanair's revenue model involves not only charging customers their advertised base fares, but also charging a large number of miscellaneous charges and fees. Its sources of revenues are as diverse as checked baggage fees of up to 150 euros to re-editing fees of up to 160 euros for a misspelled name change ("General Terms & Conditions of Carriage," 2011). In addition, it also has a series of ancillary revenues such as: in-flight food, beverages, merchandise and third-party advertising on seats and lockers; a car-hire partnership with Hertz; travel insurance packages; transfer services; and a mobile phone roaming service (*Air Scoop Ryanair Business Model 2011*, 2011).

## 1.7. ECONOMIC MODEL

An economic model is defined as a mathematical description of both the determinants of behavior and the jointly observed outcomes of this behavior at a given point in time (Cicchetti et al., 1973). It represents a tool to analyze any kind of behavior and its outcomes in economic terms using different kinds of economic and mathematical modeling. This encompasses everything from a simple supply-demand model in an introductory microeconomics course to the economic model of moral motivation (Brekke et al., 2003).

While Teece (2010) states that business models have not been sufficiently considered by economists, we argue that historically economics often used the term economic model to describe what is nowadays considered to be a business model. For example, Hansen and Wernerfelt (1989) used the term economic model to explain the performance of companies.

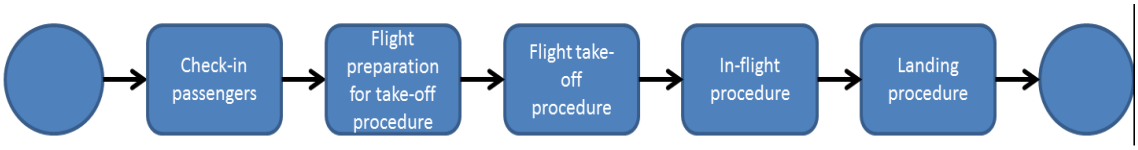
The term economic model was often used as a buzzword in the past. A typical example is that several papers in leading economics journals in the 1970s (e.g. El-Hodiri (1971), Newhouse (1970)) used the term economic model in the title but did not mention it a single time in the text. However, the term business model has conquered some of the economic model literature and was used as a means to characterize topics such as nature preservation (Sovinc, 2009), the situation of the US national economy (Cappelli, 2009) or in a comparison of Asian and US economic models in (Singh & Zammit, 2006).
While business models provide a richer logic of the firm and the way it operates within an industry or economy, economic models provide an economic and mathematical rational specific to a firm (i.e. profit functions of a firm), industry (i.e. the market structure of the US airline industry (Ciliberto & Tamer, 2009) or an economy as a whole (Casadesus-Masanell & Zhu, 2010).

In the case of Ryanair, the firm uses economic models in order to set flight prices through an analysis of the elasticity of demand. Economic models thus allow airlines to, for example, draw mathematical correlations between their customers' expenditure on air fares and expenditure on non-fare items (see Njegovan (2006)) for a similar model).

## 1.8. BUSINESS PROCESS MODELING

Since the business process hype preceded the business model hype, several authors in the late 1990s and early 2000s used the terms business modeling and business process modeling interchangeably (Akkermans, 1995; Dave, 1998). While the importance of business process modeling may grow conjointly with e-business models (Wang & Wu, 2011), the two terms no longer overlap in the research community. Although the distinction in the management literature seems to be clear by now, some misuses still exist in the information system and computing fields as well as in some conference proceedings (Ouyang et al., 2009; Pavlovski & Zou, 2008; Sukaviriya et al., 2007). To clearly state the distinction: business process modeling is an approach to describing how businesses conduct their operations and typically includes graphical depictions of activities, events and control flow (Recker et al., 2009). Process modeling thus enables a more structured identification of the means by which transactions are executed within an existing business model. Figure 1.4 presents a simplified business process model of an airline company.

*Figure 1.4: Simplified business process model of Ryanair.*




*Source: Based on Ploesser et al. (2009), Figure 1, Page 2.*

## 1.9. IMPLICATIONS

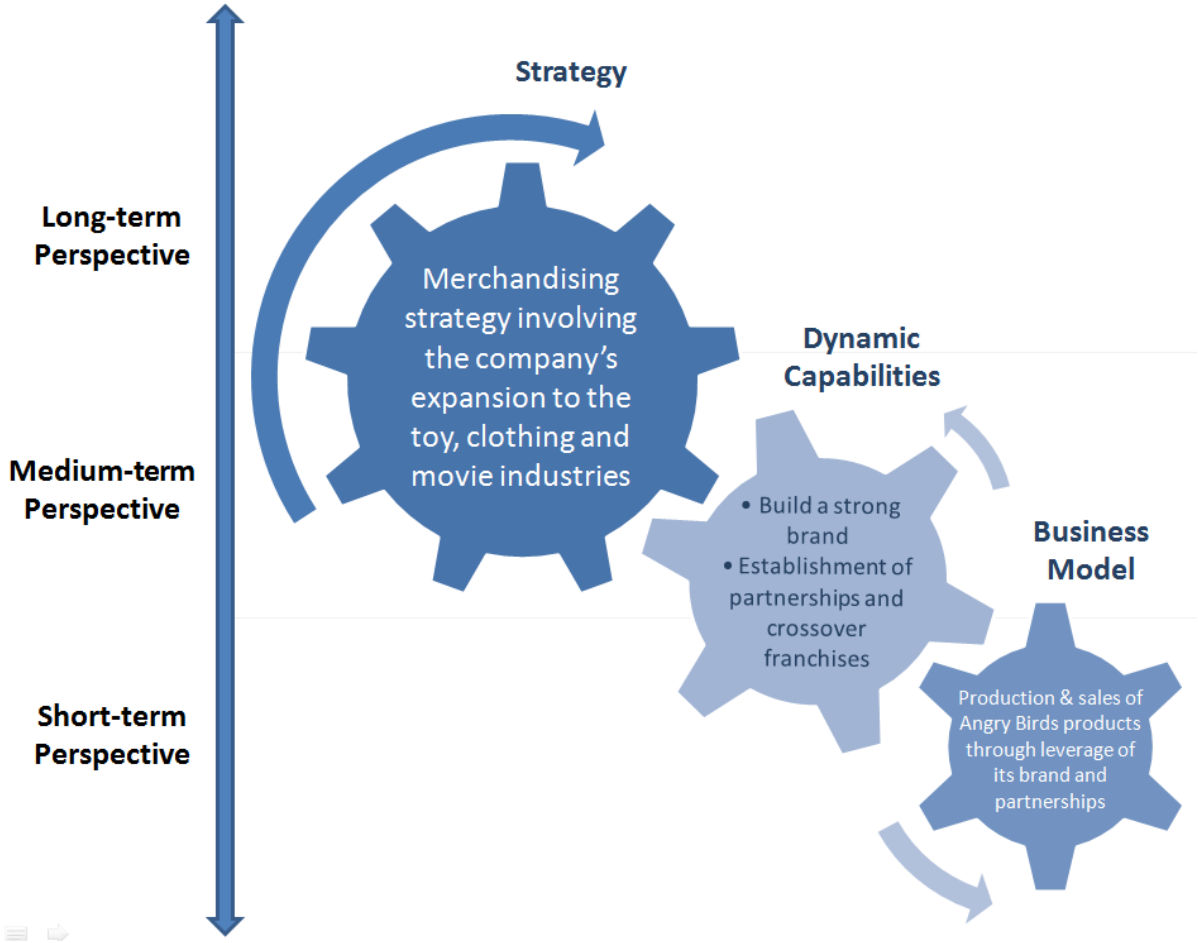
Unfortunately, many scholars have seen business models as something that managers should use to explain various phenomena (Christoph Zott et al., 2011). Accordingly, when the limitations of doing so are recognized, the term business model is criticized when it would be more appropriate to criticize the way in which it is implemented.

Porter notes that taking the business model in isolation from the company's strategy may hinder the firm's most important advantages. Numerous cases supporting this view can be found in the mobile application industry. When companies launch a successful mobile application on the market, one thing is certain: copy-cats are just around the corner. The initial business model may prove successful, meaning the decisions made and consequences of such decisions generate a positive outcome within a certain timeframe. However, contingencies such as copy-cats (competitors) force the company to have a plan of action for the different eventualities that may arise. Without a clear strategy ready to modify the existing business model, the competitive advantage may soon be offset. This view is congruent with Porter (1980) who contends that a firm must keep on innovating as it is constantly exposed to new competitors and substitute products. As an example, Rovio, the company that launched the

famous game for mobile phones Angry Birds has constantly updated its business model. Since it was launched in December 2009, the company has offered several free updates of its existing games in order to keep its audience engaged. Angry Birds also launched special editions of the game such as Angry Birds Rio and Angry Birds Seasons as well as a large array of clothing and toys in order to strategically increase its revenue streams by up-selling its existing happy customers as well as by reaching new customers (Mangalindan, 2011). By strategically upgrading its business model by nurturing its dynamic capabilities (Figure 1.5), it has been able to grow its revenue streams. Angry Bird is among the most downloaded mobile applications in the Apple App store (Baker, 2012) and aims to become one of the world's largest entertainment franchises (Wingfield, 2011).

Rather than describing business model as an inadequate management "approach", it is better to describe it as an "incomplete approach". A business model focuses the attention of the strategist on decisions that have short-term consequences. However, a business model does not tell the strategist to disregard the company's strategy when deciding how the company should react to upcoming contingencies. In order to outperform competitors in the long run, strategists must consider three important steps. First, they need to not only choose the right combination of resources (in line with the resource-based theory) but also the most efficient transactions (in line with the TCE) at a particular time. Second, they must be able to renew their distinctiveness as competition threatens through the constant development and nurturing of dynamic capabilities. Third, they must be able to redefine their business model in a quick and effective manner in accordance with the strategy and the contingencies presented along the road. Thus, a business model does not by itself give strategists all the answers for how to operate a business and generate a sustainable competitive advantage. Instead, it paints a picture of the company and reveals how the various elements of the business work together at a certain moment in time.

*Figure 1.5: Framework 1 applied to the Angry Birds case*



## 1.10. CONCLUSION

Two main topics have been addressed. First, we aimed to improve understanding of the business model term through a theoretical analysis. Second, we attempted to define the business model's distinctiveness and its connection with other popular management terms. Our research revealed that the business model terminology has been criticized from three main perspectives. First, it was defined as the management philosophy of the future during the dot-com era when, due to its incomplete nature, it was revealed to not necessarily be so. Second, the dot-com bubble provided several examples of poor management practices that had been adopted in the name of a company's business model. Third, the fuzziness associated with its meaning has divided opinions among scholars concerning its value and usefulness in the management field.

This paper sheds light on the distinctive character of the term and the need for it to be complemented with a clear and operational strategy. Hence, managers seeking to outperform their competitors in the long run need to focus on: 1) choosing the right business model (selecting the right combination of resources and associated transactions) for the present circumstances; 2) executing their business model in an excellent manner; 3) continually developing and strengthening their company's dynamic capabilities; and 4) being able to effectively and timely modify their business model when an opportunity or threat arises.

### 1.10.1. Avenues for further research

Our findings suggest several avenues for further research. First, a topic closely connected to the common understanding of the term business model involves the question of what does the frequently used term "business model innovation" mean? Specifically, which elements of a business need to be altered in order for a change to be considered a business model innovation? Currently, business model innovation is often used by consulting companies for marketing changes that rarely go beyond a "simple" process improvement. Thus, a business model innovation should involve more than a simple business process redesign.

Change and innovation in business models bring us to the second important topic: how are business model changes path-dependent? Path dependency explains how the set of decisions one faces for any given circumstances is limited by the decisions one has made in the past, even though those past circumstances may no longer be relevant (Pierson, 2000). The importance of path dependency in the accumulation of firm-specific technological competencies, and how managers are heavily constrained in the directions of their technological search, was well explained 15 years ago (Patel & Pavitt, 1997). Therefore, the question is first if and then how path dependency constrains future changes in a business model. For example, Ryanair may not have certain strategic choices available as a result of its current and past business models (e.g. being a no-frills airline).

Lastly, how can a business model become a source of competitive advantage? While most components of the business model can likely be "bought" on the market or "implemented", this can hardly be the case of their interplay. In that respect, an important question concerns when one can argue that the competitive advantage of an organization is due to its business model. Further, can a business model become a powerful tool for planning and predicting upcoming forms of competitive advantage and, if so, how?

# Chapter 2: DISRUPTIVE TECHNOLOGIES: A BUSINESS MODEL PERSPECTIVE ON CLOUD COMPUTING[2]

A viable business model is crucial for the successful commercialization of disruptive technologies. The cloud computing industry provides an ideal example for exploring how various elements of a business model contribute to a product's success (or failure). We examine how Amazon.com, Salesforce.com and Siebel responded to the disruptive power of the cloud computing technology. Our findings suggest disruptive technology *per se* is not the reason for the collapse of large corporations, but rather the failure to adapt or create new business models to incorporate novel technology. Our findings have direct implications for strategic managers and entrepreneurs seeking to leverage disruptive technologies through the right business model.

## 2.1. INTRODUCTION

Designing viable business models remains a critical challenge for emerging and existing enterprises. Emerging enterprises often fail due to their inability to define a sound business model and established enterprises often suffer from their inability or unwillingness to change their business model (Al-Debei & Avison, 2010; Casadesus-Masanell & Ricart, 2011; Desouza et al., 2009). A viable business model must not only be sustainable from an economic point of view, but also aligned with the existing market realities, customer expectations, and competitive pressures (Braganza et al., 2009; Christensen, 1997). While acknowledging that designing business models is a serious undertaking in any industry, we assert that the current information technology sector has unique characteristics that make it an even tougher challenge. Business models built around successful products few years ago (i.e. GPS receivers, portable game devices) are rapidly becoming superseded by new and innovative ways of delivering value to customers (i.e. technological advances in Smartphone technology).

However, technology by itself has little value. Value is generated when technology is commercialized through a business model (Chesbrough & Rosenbloom 2002). Chesbrough (2010) emphasizes that technology commercialized in different ways will yield different results and that a company "has at least as much value to gain from developing an innovative new business model as from developing an innovative new technology" (p. 356).

In this paper we focus on the cloud computing industry due to its influence for the future trends of the development of IT and IT-related sectors (Low et al., 2011; Qing & Chun, 2010). Forrester estimates the size of the cloud computing market at USD 40.7 billion (Ried, 2011). The International Data Corporation (IDC) forecasts that by 2015 about 24% of all

[2] This chapter is based on DaSilva, C., Trkman, P., Desouza, K. C., & Lindic, J., 2013. Disruptive technologies: A business model perspective on cloud computing. Technology Analysis and Strategic Management. In press.

business software purchases will be cloud based (Mahowald et al., 2011). Moreover, a forecast by IBM reveals that the number of companies using cloud technologies to transform their business models will double by 2015 (Berman et al. 2012). Given the disruptive nature of the cloud computing technology (Sultan & van de Bunt-Kokhuis, 2012), we decided to explore how different players have strategically reacted to its emergence and how their actions affected, and in some cases radically changed, the course of the customer relationship management (CRM) and data storage. We provide an explanation of why Siebel (now part of Oracle) lost its dominance over the CRM industry due to its inability to change its business model. Further, we discuss how Salesforce.com explored an uncontested market space by focusing its efforts on small and medium enterprises (SMEs). We also discuss how Amazon.com leveraged its own resources and experience in low-margin types of businesses to become one of the leading cloud computing service providers.

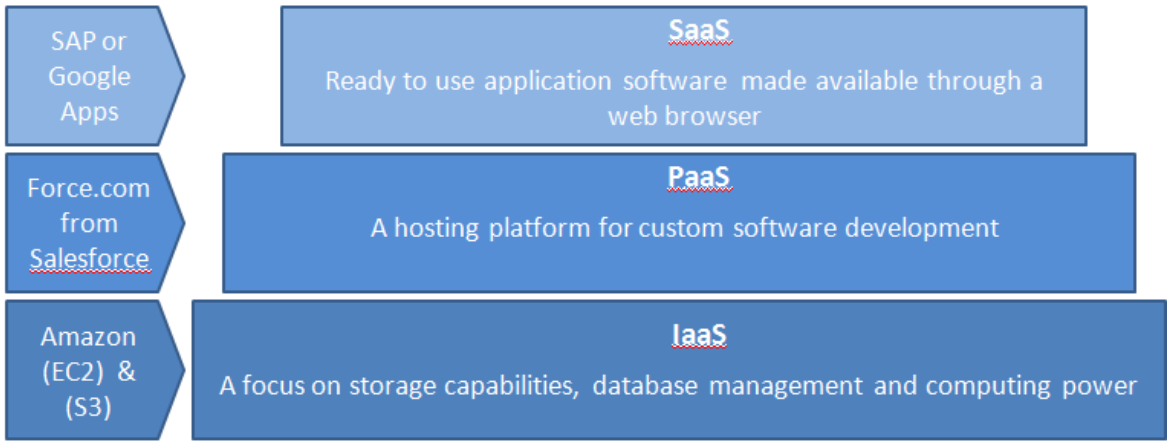
The rest of the paper is organized as follows: Section 2 provides an overview of the cloud computing industry and describes how cloud computing disrupted a well-established player and how different business models generated different outcomes. Section 3 discusses the various lessons learned from the cases as well as its practical implications.

## 2.2. THE CLOUD COMPUTING INDUSTRY

Cloud computing delivers computational and communicational capabilities via the Internet. From processing and storing information to being able to access it from anywhere and at any time, cloud computing represents a breakthrough concerning how people and companies work and communicate through the internet. Organizations employ it in order to increase computational and storage capacity without having to invest in new infrastructures (i.e. servers), personnel (software specialists) or large upfront fee payments (pay-as-you-use model where organizations only pay for their real consumption). The cloud offers a scalable information technology (IT) system infrastructure that allows companies to rapidly build scalable businesses at a low starting cost (Hugos & Hulitzky, 2010). Cloud computing can take diverse forms, including: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS) (see e.g. Hwang and Li (2010)). Although some (e.g. Armbrust et al. (2010)) claim that there is no sharp distinction between SaaS and IaaS. We believe there are significant differences in the business approaches taken by companies operating with SaaS and IaaS (see Figure 2.1).

Although cloud computing is fashionable today, organizations are still wary of exchanging their entire traditional infrastructure for a cloud-based solution (Marston et al., 2010). For example, the US government cancelled its contract with the Harris Corporation, a highly secure data center located in Harrisonburg, Virginia (Garling, 2012).

*Figure 2.1: Cloud computing explained: The levels on the top incorporate functionality from the layers beneath*




*Source: Hwang and Li (2010), Figure 1, Page 16.*

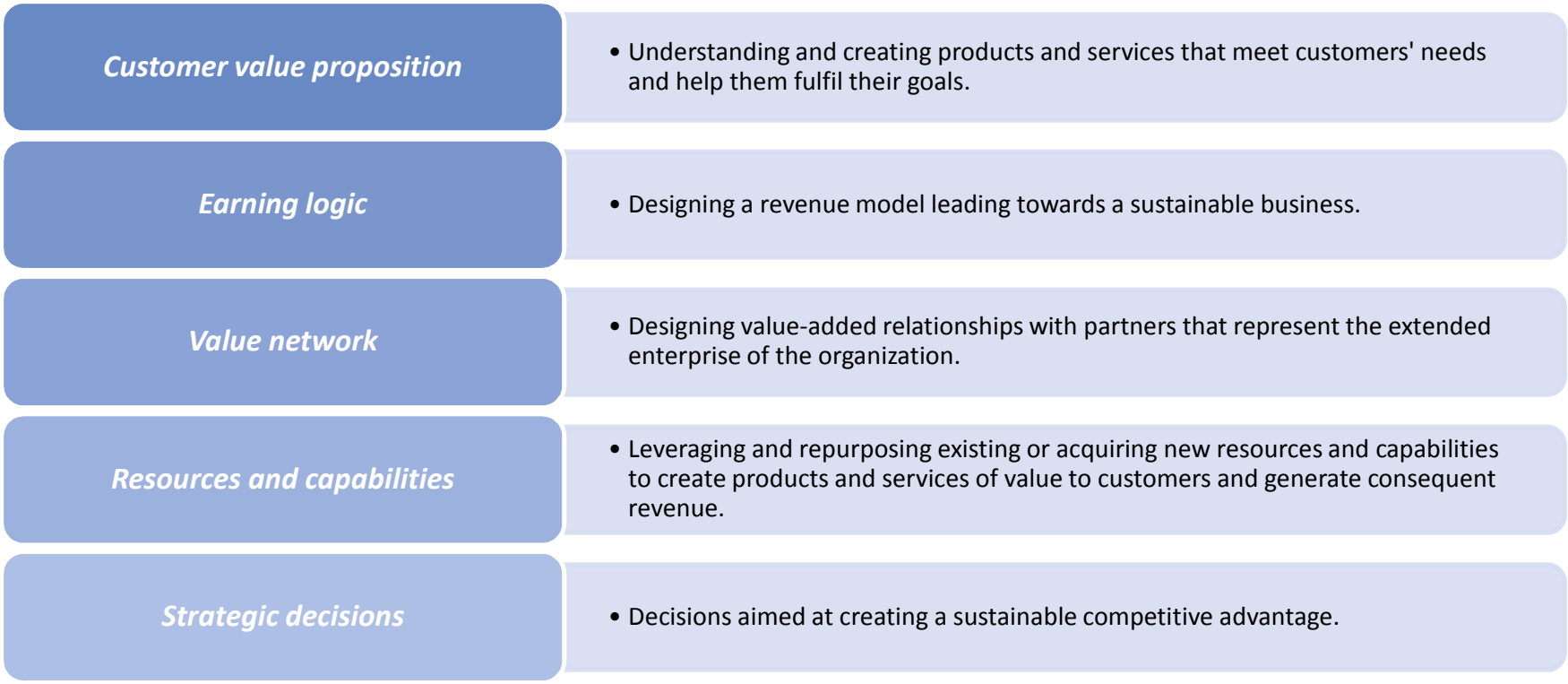
The stated reason was that for security reasons the US government prefers to have its most mission-critical applications hosted and run in-house. Much of the concern around cloud security is related to third party management, where important data is handled by the cloud service providers outside the client's organization (Dorey & Leite, 2011; Lin & Chen, 2012). As the US Department of Defense commented: "With the increasing frequency and sophistication of cyber-attacks on defense systems, we are concerned with any new approaches that can introduce new risks" (Walsh, 2011). Thus, there are still niche opportunities for players which do not focus on cloud computing to re-direct their efforts and target clients' specific needs and requirements.

### 2.2.1. Cloud computing business models

In order to explore how cloud computing disrupted incumbent companies and how different business models based on the same technology yielded different outcomes, the business model term needs to be defined. Nenonen and Storbacka (2010) define a business model as an expression of five elements: (1) customer value proposition; (2) earning logic; (3) value network; (4) resources and capabilities; and (5) strategic decisions (see Figure 2.2).

In our analysis we first consider Siebel Systems, which was founded in 1993. The company started providing sales force automation software and soon became known for its CRM solutions. In 2002, Siebel achieved a 45% market share and branded itself as the leading CRM provider (Gilbert 2002).

*Figure 2.2: Elements that reflect the business model logic*




*Source: Nenonen and Storbacka (2010).*

In 2005, the company was purchased for USD 5.8 billion by one of its long-time competitors – Oracle (Peters, 2011). Siebel was a traditional software company that required customers to invest in: (1) a license fee; (2) support services; and (3) upgrades. The high costs required to purchase in-house computing resources, licenses, training and running the system committed customers to the service (Boulton, 2012). However, the advantages of cloud-based solutions and the low switching costs associated with it made it a viable option (Marston et al., 2010). Several blogs and articles in the mid-2000s express the doubts of managers on whether they should renew their expensive legacy software packages from Siebel or try out the trendy cloud solutions. As the cloud model had proven its capability to handle high loads reliably, the real question to ask was whether Seibel was still relevant?

Cloud-based services positioned themselves as a modern alternative to Siebel with features such as social media integration, better user interfaces, and the removal of server maintenance. Siebel's past success and associated business model led the company to a doomed outcome when technology changed the rules of the game. While Siebel is progressively switching its offering to the cloud with Siebel CRM on Demand, it is still chained to an old business model and an outdated framework of resources, processes, and priorities.

### 2.2.2. The Salesforce.com business model

Salesforce.com is a web-based, on-demand and off-premise solution that allows customers to rent software. It offers a pay-per-month solution operated through the Internet (see (Weinhardt et al., (2009)) for more details on pricing models for cloud based companies) and is the fastest growing CRM providers in the United States (Wardley & Shirer, 2012).

As innovative solutions often suffer from customer resistance (Xu, 2012), Salesforce.com is facing resistance from some corporate IT departments. The reason is not technological, rather because Salesforce.com is disrupting the CRM industry and IT departments. Today, end-customers can dodge IT departments as no installation is required to use the service. The traditional IT department no longer controls the data and system – making its services less indispensable or even redundant. In fact, Salesforce.com main target customers for their CRM services are not IT departments but rather vice-presidents of sales within an organization (Irwin, 2012). Table 2.1 shows the fundamental differences between Siebel and Salesforce.com.

*Table 2.1: Core differences in the business approaches of Siebel and Salesforce.com*

| | Siebel | Salesforce.com |
|---|---|---|
| **Pricing mechanism** | Yearly fee – a large upfront payment required | Free trial + monthly subscription – No trial cost / low monthly cost |
| **Funding** | Capital expense (CAPEX) | Operational expense (OPEX) |
| **Total cost of ownership** | Higher – Dedicated infrastructure, dedicated personnel | Lower – A shared pool of virtual computing resources (networks, servers, storage) |
| **Access** | On premises hardware | Any mobile device or hardware |
| **Upgrades** | Non-frequent, manual and paid extra per upgrade | Frequent, automatic and free as part of the subscription |
| **End-user adoption** | Normal for the industry | High due to mobile access and the user-friendly interface |
| **IT Team** | Requires a specialized IT team | Minimal to non-existent |
| **Security** | Handled by the local IT team | Handled by the service provider |
| **Data storage** | On premises servers | The service provider's servers |
| **User interface** | Classic look and feel | A modern Facebook-like interface |
| **Maintenance** | High | Low to non-existent |
| **Implementation** | Normal for the industry | Very fast and easy |
| **Network** | Closed | Open to outside developers |
| **Initial strategic approach** | Targets mainly large corporations | Targets mainly SMEs |

*(1) Customer value creation*

Customers are always looking for an easy to use service with high benefits and low costs. Salesforce.com responds to this by offering a service that requires little start-up investment, practically no installation burdens, no need for maintenance or a skilled IT team, no requirement to purchase additional hardware and no minimum subscription period. Although certain customers were concerned by the off-premises data storage solution of Salesforce.com's model, the advantages of using salesforce.com over traditional providers soon outweighed such hesitation An emblematic example is the company Haagen-Dazs based in Minneapolis and part of the Nestle USA group. The company's brand manager revealed it would have cost $65,000 to set-up a custom-designed database to manage the Haagen-Dazs' retail franchises through a traditional CRM model. Instead, the company only invested $20,000 to launch the same service with Salesforce.com and can instantly monitor all franchises across the United States (Hempel, 2009).

Similarly RehabCare, a North American provider of medical rehabilitation services, built a patient admission application for clinicians within only four days using Salesforce.com's tools and services. The company revealed it would have taken six months to build a similar application using Microsoft development tools (Fowler et al., 2010).

*(2) Earnings logic*

Salesforce.com disrupted the CRM industry in two different ways. First, it changed the earnings logic by applying the "rental" model (monthly payment billed based on the number of users) to an industry hitherto characterized by lump sum licensing fees (charged for a company as a whole). The company understood that not all small businesses could afford software costing many thousands of dollars. By offering an affordable solution (a monthly fee per user) to small and medium firms, Salesforce.com cashed on a significant blue ocean market (defined by Kim and Mauborgne (2005) as an uncontested or underexplored market space) at the time deemed unattractive by large players as it could not be served with their current business models.

Second, Saleforce.com understood that prospective clients wanted to experiment with the product before committing to it. As a result, while other service providers were promising their clients a customized solution in exchange for commitment, the goal of Salesforce.com was to get prospective customers (specifically end-users) to try its product for free. During the trial period prospective clients have full access to the Salesforce.com suite of products and users' support. At the end of the trial period prospective clients have the option to purchase the application or simply walk away.

*(3) Value network*

In 2007, Salesforce.com extended its services by launching Force.com – a customization platform for corporations. The company knew it could not provide a complete back-end customized solution. Thus, Salesforce.com opened its infrastructure to external developers by allowing them to supplement its own inputs. By making Force.com compatible with all major development environments and tools (i.e. .NET, Java, PHP, Ruby on Rails, among others), independent developers (i.e. those outside Salesforce.com) were able to integrate services ranging from simple email to Facebook and Twitter within the platform. Competitors became partners, allowing Salesforce.com to better serve existing clients and acquire new ones. In 2011, more than 340,000 developers were contributing to the Salesforce.com platform (Benioff, 2011).

*(4) Resources and capabilities*

The key resources of Salesforce.com are built upon its scalable technology and products (Schonfeld, 2009). Salesforce.com spent several millions of dollars in order to build a unique state-of-the-art datacenter compatible with its clients' requirements (Tzuo, 2007).

Besides technology, over the years Salesforce.com has built up a strong team of highly competent employees (Trefis, 2011). While the technical departments were motivated to build an exceptional product, the sales and marketing departments created together a highly marketable product. The company understood that it needed to convert trial users into paying customers as well as to keep existing customers happy with the service. Salesforce.com attention to customers led it to create the "lead qualifiers" position (non-existing position until then in the industry), person responsible for contacting free trial users and identifying future paying customers.

*(5) Strategic decisions*

Salesforce.com leveraged technological developments (i.e. faster, safer and more reliable internet connection) in order to strategically reach a blue ocean by targeting SMEs that until then had been ignored by large players. This strategic focus allowed it to gain credibility and grow with its client base. Progressively, large corporations started implementing Salesforce.com in some departments – a commitment that soon spread throughout the whole company.

### 2.2.3. The Amazon web services business model

Amazon followed a different path. Its online retail store required a sophisticated computing infrastructure in order to not only operate throughout the year, but also to deal with large seasonal variations on their website (especially the large peek in demand right before

Christmas). As a result, early on it needed a very sophisticated, efficient and, most importantly, scalable computing system (Siegel & Gibbons, 2008). In 2002, Amazon decided to rent out part of its computing platform to developers. This was the beginning of Amazon Web Services (AWS), a business foreign to its core activities until then. The results motivated Amazon to offer corporate customers the opportunity to use AWS and optimize their computing power by avoiding the waste associated with overcapacity and eliminating investments in computing hardware. As the CEO of Amazon Jeff Bezos said: "You don't generate your own electricity. Why generate your own computing?" (Bidgoli, 2010). He went further to say that AWS has the potential to become as large as the company's retail business (Clayton, 2011).

*(1) Customer value creation*

At first, developers could use Amazon IT services to develop applications on top of Amazon's web store. Amazon gradually extended its computing and storage to SMEs that were able to leverage a robust large-scale computing infrastructure at a fraction of the cost of owning, upgrading and managing on-premises infrastructure. Besides helping established businesses, cloud computing and AWS removed a considerable entry barrier to start-up companies (Palmer, 2012). Amazon now serves several large corporations including Samsung, Foursquare, and SEGA.

*(2) Earnings logic*

Amazon's earnings logic is based on the freemium model. The service is free to use for new clients up to a year, in an effort to motivate companies integrate AWS (while free to subscribe, integrating AWS within a company takes time and effort, thus creating commitment). By offering a flexible on-demand pricing model, Amazon only charges customers for what they truly use with no minimum fees and no long-term commitments.
In an attempt to lock existing customers in to its service Amazon introduced "reserved instances" packages where customers pay a onetime fee (one year or three years term) get lower costs per usage (see "Amazon EC2 Reserved Instances" p. 2).

*(3) Value network*

Initially, developers acted as partners on Amazon's e-commerce platform. Developers were using Amazon's resources to develop custom applications in order to sell products from third parties resellers on the retail store Amazon.com (Bensinger, 2012).

As Amazon's focus diversified to storage and computing, developers working for start-up and SMEs also became customers. Thus, developers became resellers of Amazon's web services to companies seeking cloud-related services.

*(4) Resources and capabilities*

Amazon developed infrastructure-related resources due to its own need for a very scalable infrastructure. Amazon started the IaaS business as a way to resell the hardware capacity that sits idle for most of the year (most of the hardware exists to absorb the increased load of the Christmas shopping period). In a nutshell, Amazon's own gigantic requirements allowed it to strategically position itself in the cloud industry as the leading IaaS provider due to its economies of scale and brand name. Amazon's CEO Jeff Bezos stated that IaaS is what it has "been doing for 11 years, operating a web scale application, a very complex one, that is based on a lot of transactions with high availability, reliability in a high volume, low margin business" (Bezos, 2006). In addition, branding its service under the Amazon umbrella projects an image of credibility and reliability to possible target customers.

*(5) Strategic decisions*

The AWS strategy is based on offering a basic infrastructure at the lowest possible price. The economies of scale that have been achieved have allowed Amazon to cut its prices 19 times since it started offering cloud services (Bass, 2010). Amazon.com's competitive strategy has always been to offer the largest possible selection of products at the most competitive prices (Casey & Carroll, 2004). Thus, the Amazon AWS strategy is to become the basic infrastructure for other cloud services to build on.

To summarize, Salesforce.com and Amazon.com differ strongly in their approaches not only regarding the use of the technology itself, but also the way they apply it for commercial purposes (see Table 2.2 for a comparison of the two companies' business models).

*Table 2.2: Summary of the cloud computing business models of Amazon and Salesforce.com*

| | Amazon.com | Salesforce.com |
|---|---|---|
| **Customer Value** | Utility type | Service type |
| | Broad applicability | Narrow focus |
| | Time and money saving | Time and money saving |
| | Low entry cost | Low entry cost |
| | No subscription period | No subscription period |
| **Earnings logic** | Low differentiation – Low margins | High added value – Higher margins |
| | Billed per usage only | Billed per user/per month |
| **Value network** | Developers as customers | Developers as partners |
| **Resources and capabilities** | Strong brand equity | Strong sales team and call center |
| | A state-of-the-art IT platform that is reliable, secure, scalable, and flexible | |
| **Strategic decisions** | A freemium model where customers can use the product up to a certain threshold for free – building up switching costs | A focus on non-consumers (blue ocean) – SMEs that cannot afford complex competing solutions then move up market to replace existing solution providers |
| | Offers the cheapest alternative to owning servers/data storage hardware | A focus on selling its service to the end-user instead of the CIO |
| | Offering the lowest priced option on the market | |
| **Main Cloud Focus** | IaaS | SaaS |

## 2.3. LESSONS LEARNED

In this section, we reveal how insights from the cloud computing industry may help managers in various industries deal with upcoming strategic challenges associated with disruptive technology.

### 2.3.1. Technology is disruptive but business models determine who wins

Incumbent firms are usually not disrupted by technology per se, but rather by their inability to alter their existing business model or create a new one. Amazon.com understood early enough the potential of cloud computing. The company could have ignored its online store peaks in usage that involve up to 90% idle time and simply consider it a cost of running its operations (Siegel & Gibbons, 2008). Instead, Amazon realized that the excess processing power could be offered to other companies. Amazon transformed a required cost of operation into a new revenue stream. The willingness to divert from its core business and invest in a new experimental business model paid off. If Amazon had not taken the risk and implemented a business model foreign to its core activity and instead played waiting games (See Robinson, Le Masson and Weil (2012)), it would have missed one of the biggest business opportunities of the 21st century. Managers must be willing to experiment and build side business models that can potentially respond to emerging technological changes.

### 2.3.2. Success can be the enemy of progress

Large companies sometimes get trapped by their own success. Part of the problem may be a lack of proper management and/or willful blindness regarding inevitable change (see Heffernan (2011) for a full discussion on why managers often do not recognize the obvious). Managers' usual response to increased competition is to optimize each element of the existing business model. As our case shows, simply improving existing processes may not be the answer. Siebel's failure to fundamentally address changes and its blindness to an emerging technological change led to its subsequent commercial demise.

Managers need to constantly monitor smaller players and industry trends. If a disruptive technology threatens their business, a larger organization with less flexibility should consider either acquiring or establishing strong partnerships with players that already leverage such technologies.

### 2.3.3. Incremental changes to the existing business model are not necessarily the solution

Siebel relied for many years on its business model where large players (such as IBM) would spend a large amount of resources in order to integrate Siebel within their corporate infrastructure. At the time, the lack of alternatives made this a rational investment. In the early 2000s, SaaS began to make ground in the CRM industry. Siebel took several years to realize

the need to offer a similar product. Once it did, the company decided on a different strategic approach than established SaaS players. Instead of reaching out for new paying customers, Siebel decided to target its existing clients with an alternative cloud-based solution in the hope of not losing them. Yet this approach actually motivated Siebel's clients to question their existing provider and consider the competing cloud-based offers. May 2012 brought a major signal of Siebel's late response to the cloud and its wrong strategic decisions. It had lost a large and long-time client, IBM, company that had been running Siebel system for over 10 years (Burton, 2012).

Siebel's late entry to SaaS and excessive focus on large corporations provided the perfect opportunity for new firms to attack a then untapped market – SMEs. Thus, SaaS itself did not disrupt Siebel's success. Instead, the company's inability to reorganize its business model and strategic priorities led to this outcome. Managers must be ready to radically alter their existing strategies and build business models able to respond to technological changes.

#### 2.3.4. Focus on the blue ocean at first

Offering a product for free as a trial had two key effects. First, it allowed SMEs to become familiar with a product they had not previously used (blue ocean market). Second, it worked as a lock-in mechanism. By allowing a trial user to insert their data (Salesforce.com) or build their application (Amazon.com) in the cloud for free, users not only became used to the platform, but also committed themselves by doing this. As a result, when the trial ends satisfied users will be inclined to keep the service given the non-monetary resources already invested. As innovative technology decreases and eventually eliminates marginal costs (see e.g. Anderson (2009)), managers should consider freemium revenue models in order to lure new users and convert them to paying customers.

#### 2.3.5. Invest in marketing early on

Amazon's online store reflects a strong image that supports its claim of being a quality cloud computing provider. Besides credibility, its cloud service is consistent with its online retail store marketing mantra – "the lowest price possible". By contrast, Salesforce.com had to build its reputation and it still invests nearly 50% of its revenue back into marketing (Bleeker, 2011). Given the low switching costs and high levels of differentiation offered by various players in the SaaS layer of the cloud, Salesforce.com understood that marketing played a vital role in securing and keeping early adopters. Managers commercializing innovative solutions based on disruptive technologies should not underestimate the marketing efforts associated with building a brand as well as educating, acquiring and maintaining customers.

### 2.3.6. Know your strengths and your industry

Amazon understood the limited capacity of IaaS providers to differentiate their offerings beyond price. Due to its first-mover advantage, internal database of developers and strong brand equity, Amazon was able to capture a large pool of users very rapidly. Economies of scale gave Amazon a strong competitive advantage, which translated into low prices to its customers. With razor-thin margins, the IaaS layer of the cloud left little to no room for upcoming competitors.

Conversely, the SaaS layer offers more room for differentiation. Companies will choose a SaaS solution over another depending on several aspects such as: flexibility (pricing, contracts, etc.), compatibility (browsers, devices etc.), customization, e-mail merge capacity, data import tools, after sales support, the availability of extensions and add-ons, among others (Cusumano, 2010). Thus, late entrants aiming to cash in on a new technological trend must define where the window of opportunity is still open or allows room for differentiation, and where it has already closed.

### 2.3.7. A focus on switching costs

While switching costs in the cloud computing seem practically inexistent, Amazon was able to creatively build lock-in mechanisms. While a user can switch its IaaS provider anytime it is expensive and inconvenient to change once the system has already been set up. In addition, Amazon introduced pre-paid "reserved instances" packages that provide a discount on the regular per-usage rate. Similarly, Salesforce.com offered a free trial to new users which involved them having to insert their data into the system. By putting in time, there is less incentive to switch to another platform and re-insert all the data again.

While innovative technology usually reduces transaction and switching costs, companies must devise creative ways to lock customers into their products through ways that go beyond pure financial commitments.

This line of thought helps explain why the business model of another software provider, Microsoft and its Office Suite, remained largely untouched (that said: Office is moving into the cloud with its Office 365 solution). Despite the growth of the Internet and various competitors such as Open Office and Google Apps, Microsoft Office still holds a market share of over 90% (Fildes, 2010). Microsoft has namely succeeded in increasing the switching costs of its users who become used to Office as part of their everyday life and will likely also ask for that same software at work. Moreover, documents and spreadsheets are frequently shared among people, often on an ad-hoc basis which creates an important network effect – the value of an individual's use of Office depends on the number of others also using it. This makes initial economies of scale that much more important compared to e.g. Siebel where only a limited group of employees knew how to use the system.

## 2.4. CONCLUSION

Cloud computing technology is here to stay and will continue to transform businesses in a wide variety of ways. As it opens new opportunities for entrepreneurial ventures to develop and grow, it will also bring about the gradual collapse of corporations unable to adapt their business model to the new technology early enough. Our case refers to Siebel and its slow response to technological changes, Salesforce.com's blue ocean strategies as well as Amazon's strategy that led the company to shape a totally new industry foreign to its then current core business. We summarized how different companies faced a disruptive technology. We started by referring to the importance of organizations questioning their existing business models in the face of technological change. Then we discussed how Siebel lost its safe harbor in the market, a consequence of both technological change and especially its inability to respond to customers' demands (a shift in customers' value propositions). Since what customers value may change over time, companies must know what their core resources and capabilities are and adapt them accordingly. Amazon spotted an emerging customer need and leveraged its core capabilities and resources in order to enter and succeed in a new low-margin type of business. Finally, we revealed how switching costs can be abruptly reduced by technological innovations. By reaching non-customers (a strategic decision) and bringing switching costs down to nearly zero (innovative earnings logic) Salesforce.com has progressively become one of the main players in the CRM industry.

Through the lessons learned, strategic and innovation managers can understand not only how technological advances impact companies' performances, but most importantly how different business model approaches lead to different ways of leveraging the technology. As new disruptive technologies arise, managers need to be aware that simply incorporating new technology within their existing business model may not be enough. Congruent with (Christensen, 1997), late "me-too" entry strategies best outcome is survival, not thriving. Novel technology may require a totally new strategic approach that may at first seem controversial given the existing practices of the company, but necessary in order to ensure its long-term prosperity.

# Chapter 3: VALUE PROPOSITION AS A CATALYST FOR CUSTOMER FOCUSED INNOVATION [3]

Through a single embedded case study, this research advances the theory on value proposition - core element of any business model. By identifying and systematically analyzing innovations introduced by Amazon.com, we deduced a framework made of five complementary perspectives: Performance, Ease-of-use, Reliability, Flexibility, Affectivity; known as PERFA. As managers are the ultimate decision-makers on what to innovate, our framework represents a tool for better decision making when innovation is concerned. It redirects managers' attentions towards what customers truly value by putting them in their client's shoes. Through the use of the PERFA framework, managers are able to better understand what the impact of a novelty is and how it will affect customer value proposition. This research has high practical implications for both IT and non-IT managers responsible for innovations and new product development.

*"One striking discovery is that it is exceptionally difficult to find examples of value proposition that resonate with customers." (Anderson et al., (2006, p. 2).*

## 3.1. INTRODUCTION

Drucker (1999) claims that a serious cost disadvantage may destroy a business and that business success is based on the creation of value and wealth. The common definition of value relies on the price-quality ratio of a product or the difference between perceived benefits and perceived costs. It is a description of a customer's problem, the solution to it and value from the customer's perspective (Chesbrough & Rosenbloom, 2002). A value proposition describes how a company's offer differs from those of its competitors and explains why customers buy from the company.

Perceived value comprises two complementary concepts, i.e. perceived benefit and perceived costs. Perceived benefit is frequently equated with the characteristics and functionalities of products and their quality (Afuah & Tucci, 2000; Kambil et al., 1996). As the literature suggests, a company can differentiate its products in various ways (Afuah & Tucci, 2000; Caruana et al., 2000; Kambil et al., 1996; Trkman, 2010): product features, design, timing, location, service and support, product mix, linkage between functions, linkage with other companies, reputation and a combination of these. But customers do not buy a product's characteristics; rather, they buy the benefits a product provides. During the decision-making process they compare the characteristics of a product with those of competing products. This literature mainly deals with characteristics from an objective quality standpoint (e.g. the

[3] This chapter is based on Lindic, J., & Silva, C. M. d., 2011. Value proposition as a catalyst for a customer focused innovation. Management Decision, 49(10), 1694-1708. In comparison to the paper further changes were done to improve the rigour and presentation of the model.

company's viewpoint). As it is buyers who ultimately decide on the purchase, the shift to their viewpoint is crucial. During their decision-making, customers ultimately take decisions based on the benefits a product offers, not its characteristics or features per se.

At the same time, the business literature offers many empirical examples but lacks universal models enabling a systematic approach to innovation. Kim and Mauborgne (2005) offer a strategy canvas – a tool for value proposition innovation. Yet the business literature does not systematically decompose value as a concept and this therefore hinders the formulation of an innovative value proposition.

During a value proposition assessment customers also evaluate the perceived costs. These are a combination of nominal prices and other costs related to product acquisition, use and disposal (Montoya-Weiss et al., 2003; Slater & Narver, 2000; Zeithaml, 1988). In addition to direct financial costs, customers consider additional costs, e.g. time, risk, search, psychic and effort (Gronau, 1973; Kambil et al., 1996; Leibowitz, 1974; Leuthold, 1981; Mabry, 1970; Murphy & Enis, 1986). Both perceived benefits and perceived costs form the value customers perceive; hence, the higher the perceived benefits and lower the perceived costs, the higher the value perceived by the customer.

As innovation per se does not have a direct link with enhanced benefits (Anderson et al., 2006) and products with higher quality and more features do not necessarily create a higher value proposition (Bower & Christensen, 1995; Christensen & Overdorf, 2000), the question is what to innovate in order to offer customers an enhanced value proposition? Through an embedded case study based on Amazon.com, we created a framework that helps companies identify the key factors that can give their prospective customers enhanced value proposition.

### 3.2. PERSPECTIVES ON VALUE PROPOSITION

Customer value proposition has become one of the most widely used terms in business markets in recent years (Carter & Ejara, 2008, p. 69). Value is created when product attributes, e.g. design, service or support, match specific customer needs (Kambil et al., 1996). Congruently, the marketing literature often uses value proposition and closely connects it with the values a company delivers to customers in order to satisfy their needs (Anderson et al., 2006). A value proposition is about the customer but for the company's internal use and it must also define exactly what the organization intends to provide to the customer's life (Lanning, 2000). It defines the way organizations work by focusing their activities on best serving their customers while doing so profitably (Barnes et al., 2009). It describes a customer's problem, the solution to it and value from the customer's perspective (Chesbrough & Rosenbloom, 2002).

Interestingly, research by Anderson et al. (2006, p. 2) reveals that "it is exceptionally difficult to find examples of value proposition that resonate with customers". Companies usually think

of value proposition in terms of what they offer their customers rather than what their customers truly value (Bower & Christensen, 1995; Christensen & Overdorf, 2000). In fact, most managers in Europe and the USA equate their list of benefits to their value proposition without much concern about customers and competitors (Anderson et al., 2006). This simplicity engenders a major drawback: Managers may consider advantages that offer the customer no real benefit or are common in the industry and therefore provide no differentiation factor (Anderson et al., 2006; Kim & Mauborgne, 1999; Popovic et al., 2009). The reality is that customers do have options and companies have to differentiate their offerings from the next best alternative which involves a careful look at both the competition and what their target clients truly value. Value proposition should ultimately aim to provide focused and distinct benefits that help solve target customers' problems by being distinctive (i.e. superior to those of its competitors), measurable (i.e. based on tangible points of difference) and sustainable (i.e. valid for a certain time period) (Anderson et al., 2006). Therefore, a value proposition is not about a company's features or offerings but about the customer's experience in terms of their needs and wants (Barnes et al., 2009).

Customers assess a certain company's value proposition based on the following formula: Value *equals* Benefits minus Costs. Value proposition comprises capability and impact (both benefiting customers) as well as costs (viewed as a trade-off). Capability means what a company can do for a customer. Impact is how a company will help the customer succeed and cost refers to what the customer must give in return for the privilege (Barnes et al., 2009). Costs can be represented by nominal prices (Shoham & Fiegenbaum, 2002; Slater & Narver, 2000; Ulaga & Chacour, 2001; Walters & Lancaster, 2000; Zeithaml, 1988) or by non-nominal terms such as risk and effort (Kambil et al., 1996; Murphy & Enis, 1986). It derives from this that value is specific to a particular instance because time, convenience, perceived risks, among others, are factors that vary from company to company and from individual to individual (Barnes et al., 2009). As companies compete in creating value for their customers by increasing benefits and reducing costs, our case study approach takes the value proposition definition of Barnes et al. (2009) a step further by decomposing it into five components.

Each of these components incorporates both benefits and costs perceived by the different customers of Amazon.com, e.g. end consumers, shopping infrastructure customers and developers. The concepts and tool are built on the premise that customers make the final choice in the decision-making process and therefore the value proposition should be analyzed from the customer's standpoint.

### 3.3. DATA AND METHOD

Here we describe the research method employed in our research. Given the dynamic nature of innovation (Chesbrough & Rosenbloom, 2002; Cooper, 1998), it is appropriate to use a case study approach since one of its key strengths is to trace changes over time (Garvin, 1987). To understand what works and why, we decided to base this study on a a multiyear, qualitative,

interpretative study (Govindarajan & Trimble, 2005). Longitudinal research has the advantage of encompassing a wide spectrum of innovations. Further, we chose the case study methodology as it is useful for research into specific innovation and specific categories of innovations (Eisenhardt, 1989).

Although analysis involving multiple case studies generally has greater validity than single case studies, a single case study can lead to a more detailed and precise analysis (Dyer & Wilkins, 1991). A meticulous understanding requires the study of a small number of cases since every additional case reduces the time resources available (Miller & Salkind, 2002). Through the collection and analysis of data from a single case based on a longitudinal setting, our study is not aimed at generalizability, but rather to provide the starting point for the development and testing of theory (Bickman & Rog, 1998; Gummesson, 1997; Miles and Huberman, 1994; Scapens, 1990; Strauss and Corbin, 1990; Yin, 2003).

### 3.3.1. Relevance of Amazon.com

Our approach makes it important to carefully choose the case. A random selection is unnecessary and even undesirable (Eisenhardt, 1989). The selected case should be the most informative possible given the informative resources available (Hägg & Hedlund, 1979; Patton, 2001; Stake, 1995). Thus, we decided to choose Amazon.com for several reasons. Our choice was based on the following items::

- Amazon.com has managed to transform itself from an online bookstore to one of the world's key online shopping destinations. It has entered the market of application solution providers, offers business solutions (warehousing, distribution) and is among the top players in the cloud computing industry. Given its evolution over the years and high level of diversification, Amazon.com offers the opportunity to discover a broad spectrum of innovations.

- Amazon.com also represents the so-called new economy yet at the same time it shares many characteristics with traditional companies. In fact, offline activities represent 70 percent of its core business (Niekerk, 2000). As a result, we could identify innovations which are common in both traditional and new economy companies.

- Stake (1995) suggests we select a case from which the most can be learned. Amazon.com has managed to develop from a start-up to one of the largest companies in the world in slightly more than a decade. This enables an analysis of innovations in the company's different life cycle phases.

- The selected case must enable a comparison with existing literature (Yin, 2003). In the last decade, Amazon.com has been one of the most frequently used examples in

business and academic literature and has thus already been analyzed from different viewpoints which can help improve the validity of the findings.

- Amazon.com initially had extreme and contradictory predictions regarding its future. Before the internet bubble burst in 2000, Amazon.com was typically featured as a role model for other online companies and its CEO Jeffrey Bezos was even selected as Time's Person of the Year 1999. After the dotcom bust, even the most prominent scholars (e.g. Porter (2001)) attributed it with negative characteristics and predicted a bleak future for the company. Its controversial story makes it an interesting case to study and learn from.

### 3.3.2. Data sources

We gathered data from four different sources which are summarized in Table 3.1. The CEO's letters to shareholders, annual reports, blogs, audio and video recordings were included and compiled in an excel document in order to gain insights into the information the company considered important for its stakeholders. As patents are one of the most relevant forms of protecting innovations, an analysis was conducted in order to identify granted and pending patents. The aim of analyzing news releases was to identify changes and innovations the company found important enough to communicate to the general public. The last group of data sources included trusted and objective academic and business periodicals dealing with Amazon.com.

*Table 3.1: Summary table of the data sources*

| Data Type | Data Source |
|---|---|
| **Internal data** | Amazon's annual reports<br>Letters to shareholders<br>News releases on Amazon's website |
| **Patents** | Filed under Amazon.com<br>Filed under Jeffrey P. Bezos |

| | |
|---|---|
| **Scientific and Professional Literature** | Business week, The Economist, Advertising Age, The Wall Street Journal, The Financial Times, FastCompany.com, among others. |
| **Academic Literature** | 88 relevant articles published in 71 journals from different scientific fields (e.g. management, informatics, marketing, finance, computer science, among others |

### 3.3.3. Data Collection

We carefully selected approaches to address the quality of the findings as suggested by the literature (Gray, 2004; Kidder et al., 1986; Remenyi et al., 1998), namely:

- Construct validity and internal validity
- External validity
- Reliability

Our research is based on the definition of innovation by Rogers (1995) whereby innovation is an idea, praxis or object that is perceived as new. Further, the level of newness can be perceived in different ways: new to the company, to the market or to the world or even new to the manager of a unit that innovates (Nohria & Gulati, 1996). To include as many innovations as possible, we decided to use a less restrictive definition whereby the concept of newness is checked at the company rather than the market level.

As every method uncovers a different view of empirical reality Denzin (1978) and every researcher is confronted with several indicators of the same phenomena (McKinnon, 1988), triangulation was employed in order to improve the construct validity. It was used in the traditional (Denzin, 1978; Eisenhardt, 1989) and post-modern (Richardson, 1997) senses. In a more traditional sense we used triangulation to address the internal validity where different sources should point in the same direction. In addition, we used it in the post-modern sense to build a complete view on business innovations. We aimed to accomplish this by recording the context in which individual novelties were introduced and reported. In order to ensure that most innovation would be included in our study, news releases and specialized media were also considered and analyzed in order to gain even deeper insights into Amazon.com's innovations and to acquire a broader view. To improve the validity of the findings we also conducted triangulation with Amazon.com's buyers. When applicable, evidence and examples of innovations were gathered from all of these groups.

### 3.3.4. Data analysis

The data was analyzed through qualitative methods (Roberts, 1997). Our data sources on Amazon.com's innovations were examined through an interpretative approach. Both explicit and implied comments concerning the innovation were collected and categorized as a result of their value to customers.

In the data collection phase we sought to identify novelties Amazon.com had introduced to the market or in their internal processes. We did not focus on whether the novelty was really new to the market as the perception of the novelty is more relevant than the actual fact of being first in the market. In the first data analysis phase annual reports were studied, followed by letters to shareholders and news releases. Innovations identified were recorded in chronological order. Besides identifying novelties, we sought to understand the big picture of how Amazon.com was evolving. For each analyzed innovation, a date, title and short description was added.

In the second phase, innovations were identified based on their characteristics and the context in which they appeared. For each innovation, the case study database included a description of the novelty, its key characteristics (i.e. why the data source identified this as a novelty), target customers (e.g. end customers, shopping infrastructure customers and/or developers) and the context in which it was introduced.

## 3.4. FINDINGS

### 3.4.1. Amazon.com's customers

Knowing who will benefit from the innovation is fundamental in the study of customer value proposition. Our case study revealed that Amazon.com has three main customer groups who purchase its goods and services: End consumers, shopping infrastructure customers, and developers. Table 3.2 exposes the three different customers groups Amazon.com serves and that helped understand the reasoning behind innovations.

*Table 3.2: Amazon's customer group*

| Type of customer | Description |
|---|---|
| **End customer** | Individuals, households and businesses that purchase goods from the website www.amazon.com |
| **Shopping infrastructure customers** | Business or individuals who use Amazon.com's platform in order to sell products |
| **Developers** | Individuals and corporations who use Amazon.com's infrastructure web services that comprise a cloud computing platform |

### 3.4.2. Innovative value proposition explained: PERFA

Given the novelty of our approach to value proposition, the review of the innovations was not approached with an a priori list of categories. However, as we iterated back and forth between the data, categories such as performance and ease of use became evident. In our coding and creation process, similar to the procedure taken by Petty and Gruber (2011), categories combination or abolishment were made throughout the successive examinations of the data.

Ultimately, this process led us to the development of categories (Roberts, 1997). Each novelty registered was systematically analyzed in order to understand what and how each one of them affected Amazon's customers. For example, it was clear that certain innovations were bringing additional technical performance as well as greater convenience to their customers. Others, like Amazon.com's AuthorCentral, were not so clear and required us to go deeper into the literature and seek more sources of triangulation. All innovations could at least be grouped within one category. At first, innovations felt within multiple categories. Through further iterations and discussion we progressively trimmed down our categories to five that captured the overall customer value (either positive of negative) generated by the innovation.

The next step in our study was the analysis of our findings within the existing literature. After several discussions with scholars and after consulting the literature on the terminology that could best express our trimmed down categories, we decided to name our framework PERFA: Performance, Ease of use, Reliability, Flexibility, and Affectivity. The next section provides a literature and example based perspective that reflects the 5 final categories of our study.

#### 3.4.2.1. PERFA

**Performance** defines the way organizations work by focusing their activities in order to best serve their customers while doing so profitably (Barnes et al., 2009). Perhaps more elucidative and adapted to our case is the definition by Bonner (2010) which states that the performances of innovations or new goods or services offered to customers is a result of a superior company's offering in terms of quality, technical performance, features and ability to meet customer needs and demands. This perspective emphasizes innovation as a generator of performance in a customer-oriented way as can be found within Amazon.com. Indeed innovations introduced at Amazon.com, such as allowing third party sellers to offer their products on the web site, provide Amazon's end consumers with one of the widest product choices available online in a single location. As third party sellers compete for business, end consumers are able to select items that best suit their needs and have the most competitive price. Moreover, features such as product reviews provide end consumers with independent opinions on the items Amazon.com sells.

It aligns consumers' expectations regarding the performance of the product and therefore minimizes the possibility of dissatisfaction and returns. Amazon.com also launched innovations that highly benefited public and private libraries. Through the introduction of a bar code on its books that are compatible and available upon request to all its corporate customers, Amazon reduced additional costs for the customer as well as shortened the books' time to shelve lead time.

Further, Amazon.com introduced the possibility of third party developers using its advanced and highly technical performant infrastructure (especially storage and cloud computing) which offers developers the possibility to use a state-of-the-art IT platform at a marginal cost.

**Ease of use** refers to the degree to which a person believes that using a particular system or product will be effort-free (e.g. the ease of search and acquisition, usability, personalization, service and support). All else being equal, a feature or application perceived as easier to use than another is more likely to be accepted by users (Davis, 1989; Wang & Wang, 2009). Interestingly, in their meta-analysis of the relationship between the characteristics of an innovation and its adoption, Tornatzky and Klein (1982) found that compatibility, relative advantage, and complexity have the most consistent significant relationships across a broad range of innovation types.

*Table 3.3: PERFA Framework*

| PERFA framework | Definition | Practical example |
|---|---|---|
| **Performance** | The way organizations work with the aim of serving best their customers while doing so profitably (Barnes et al, 2009) | Product diversity through third party sellers<br>Alignment of customers' expectations through product reviews<br>Compatible barcode system for libraries<br>Cloud computing services |
| **Ease of use** | Degree to which individuals believe using a certain system or product will be effort free | Optimized product search engine<br>"One click" purchase<br>Amazon approval slip<br>User-friendly cloud computing services |
| **Reliability** | The ability of a product to deliver according to its specifications (Van Raaij & Pruyn, 1998) | Shipping platform<br>Cloud computing services |
| **Flexibility** | Firm's ability to reallocate and reconfigure its organizational resources, processes and strategies as a response to environmental changes (Sánchez & Pérez, 2005) | Sales of audio files in MP3 and CD<br>Amazon's web infrastructure<br>Mechanical Turk |
| **Affectivity** | Feeling or emotions associated with working with a company or using its products and services | Kindle<br>AuthorCental Service<br>Leverage of the Amazon.com' brand |

Complexity is defined as "the degree to which an innovation is perceived as relatively difficult to understand and use"(Roger & Shoemaker, 1971, p. 154). Therefore, the easier it is to use an innovative application or feature, the more likely it is to be accepted by the user. Consequently, ease of use reduces the cost (effort) included in the value proposition equation and increases its value.

Amazon.com offered its end consumers the possibility of them searching among thousands of books through an optimized keyword system based not only on the title of the book, but also on keywords spread throughout its content. This optimized search tool reduces the consumer's time and energy related to finding a certain item. Another innovation creating an enhanced value proposition for Amazon's end consumer is the "one-click" patent filed in 1999 and featured on its online store. This feature allows customers to make online purchases with a single click and they do not have to re-submit the lengthy and cumbersome payment and shipping information if the user has previously provided it (return customers). Further, Amazon.com launched innovations of great benefit to public and private libraries. By introducing the monthly Amazon approval slip, libraries receive a monthly report on new books that match their selection criteria for purchases of new titles. For example, a business school library might only be interested in new books on the topic of management from a very specific publisher. Consequently, Amazon.com provides a pre-selection of all new releases that match the customized criteria of each library that joins the service. As developers and shopping infrastructure customers are concerned, Amazon allows them to use their highly scalable web services to support their growth needs in a user-friendly manner.

**Reliability** is defined as "the ability to perform the promised service dependably and accurately" (Pitt et al., 1995, p. 177). Van Raaij and Pruyn (1998) similarly perceive reliability as the ability of a product to deliver according to its specifications. Innovation may therefore add to the value proposition for customers by performing in accordance with the standard set for products and services. Amazon.com has invested considerable efforts in making its shipping platform as optimal as possible. Through both internal optimization and strong partnerships with shipping companies, the company takes the task of delivering its products within the agreed time frame very seriously. At the moment, Amazon.com provides several shipping modes ranging from its latest innovation, local express delivery (i.e. delivered the same day of the order) to Super Saver Shipping (i.e. delivered within five to eight business days). As the customer decides which options best suits their needs, Amazon.com offers a full money-back guarantee on the shipping cost in case the company fails to deliver within the selected time frame. This statement assures buyers about their purchases and Amazon communicates to its customers its strong commitment to a reliable service every single time. Amazon.com's shopping infrastructure customers can leverage warehousing systems that are tested and proven by Amazon's own logistics systems. Therefore, business customers enjoy the same high level of reliability as Amazon.com itself. Nitschke, the President of Target Direct (Amazon's direct online competitor), revealed that

his company uses Amazon.com's infrastructure as Target Direct is not prepared to invest as much in technology as Amazon does (Varon, 2003). Developers also reap the benefits of the cloud computing infrastructure. Its reliability is proven on a daily basis as the same infrastructure powers Amazon.com's own shopping portal.

**Flexibility** is perceived as necessary in order to maintain the fit of an organization and a changing environment (Regev et al., 2007). It describes a firm's ability to reallocate and reconfigure its organizational resources, processes and strategies as a response to environmental changes (Sanchez & Perez, 2005). In other words, flexibility is materialized through the dynamic capabilities of a company which enable it to integrate, build and reconfigure internal and external competencies in order to face rapidly changing environments (Teece et al., 1997). Amazon.com operates in a constantly mutating and competitive online environment where customers are highly demanding given the low search costs (Brynjolfsson & Smith, 2000), large product selection (Brynjolfsson & Smith, 2003) and information about word-of-mouth based on user-generated reviews (Chevalier & Mayzlin, 2006). Flexibility is important in such a competitive environment in order to keep satisfying customers' needs as well as maintaining or increasing customers' value propositions. Several of the company's innovations emerged as a consequence of a change in the environment it operates, i.e. the introduction of the online sale of audio music files (Amazon MP3). The company understood that the market was changing and that their end consumers were no longer interested in purchasing music the traditional way in CD format. By offering this service, Amazon.com enabled its customers to purchase music in two different formats. Similarly, Amazon realized that ever more small and medium online retailers (i.e. shopping infrastructure customers) were emerging in the market, many of them with lower prices than Amazon's. The company responded to this apparent threat by transforming it into an additional source of revenue. Instead of engaging in a competitive retail war, Amazon.com decided to provide such small and medium business with the opportunity to leverage their advanced IT infrastructure at a marginal cost. Simply put, Amazon decided to become a platform where small and medium companies can outsource some of the services they need for their operations. In other words, corporate clients, many of them being Amazon.com's direct competitors, received the possibility to outsource certain areas of their business such as: selling platform; order fulfillment; online payments; advertising; and even self-publishing services. In a similar fashion, developers which create retail platforms for corporate clients (sometimes even retail stores competing with Amazon.com) can also use Amazon.com to accelerate and improve their results. In fact, Amazon.com's Mechanical Turk service allows developers to outsource a high quality workforce to complete human intelligence tasks (HIT) at a competitive rate. It provides an on-demand, scalable and highly qualified workforce paid only by results and selected by Amazon.com to help developers create better retail platforms with total flexibility.

**Affectivity** addresses the feelings or emotions associated with working with a company or using its products and services. It is highly correlated with a sense of belonging to a certain group or class (Atkin, 2004). It is also correlated with the concept of co-branding where a

brand or company may be associated with the attributes of the product or benefits derived from it (Farquhar et al., 1992). Such a brand generates emotions and feelings among its customers. A clear example of affectivity may be observed through the innovative e-book reader "Kindle" Amazon.com launched in 2007. Since then several blogs, forums, web sites and even a social network have emerged online with the aim of connecting users who share a common passion for the product. Another example is Amazon.com's ability to generate an emotional bond among its consumers through its innovative AuthorCentral service. This service offers the possibility for Amazon.com's end consumers to interact with and obtain the latest information about their favorite authors. It enables users to create an emotional bond and connection between the book they have purchased and the author. Similarly, the author of the product, i.e. who uses Amazon.com to sell their book, also enjoys similar reactions by being connected to their fans and buyers. By being able to interact directly with virtually thousands of potential buyers, authors have the possibility to create affective bonds with their actual and prospective future clients. Small online shop owners (i.e. shopping infrastructure customers) can also leverage Amazon.com's brand reputation as an online retailer. By being accepted as an integrant part of the Amazon web site, third party retailers feel they are part of Amazon.com: the largest and most successful online store.

## 3.5. DISCUSSION

### 3.5.1. Summary of key findings

This study reported the results of a longitudinal study of innovations at Amazon.com since its emergence in 1996 until 2006. One of the main strengths of a qualitative research approach is its focus and meticulous analysis of the phenomenon under study, allowing us to explore issues from an innovation perspective. This study examines not only the innovation and value proposition literature, but also provides foundations for the emergence of new innovation tools. Although scholars (e.g. Kambil et al., 1996) argue the value proposition concept is too vague to be useful for innovation, our research indicates it can be of great use for innovation if it is systematically decomposed and understood within its context. At the most basic level, we realized that not all innovations introduced by Amazon.com led to an enhanced customer value proposition.

We summarize the major findings of our research in the following three bullet points, and will comment on their implications below.

- Innovations will provide different levels of value contingent to the targeted customer they affect.

- There are several dynamics captured through our framework that influence customer value proposition from an innovation standpoint.

- While performance seems to be the main perspective of the value proposition sought by innovators, we see major opportunities for innovations targeting the other four perspectives.

When assessing whether or not to bring something new to the market, one should not ignore the different impacts it has on the different customers they serve. For example, while more diversity of vendors on the Amazon.com' website might be beneficial for "end customers", this brings more competition and consequently thinner margins for "shopping infrastructure customers". Thus, innovative solutions have different consequences for different customers. Companies should clearly consider each customer segment before launching an innovation in order to measure the benefits and drawbacks this will generate on their overall customer base.

Furthermore, managers should have a global picture of what their innovations will bring to customers. By being aware of how customer value proposition will be affected as a result of the launch of the innovation (using our five perspective framework as a basis for surveys, observation, focus groups or even just brainstorming), managers can make better decisions regarding what and how to innovate. Customer value proposition is a complex and dynamic concept (Naumann, 1995). Thus we present our framework as a guiding tool to assess to what extent an innovation, through both an ex-ante or ex-post approach, contributes to each of the perspectives of PERFA. What we noticed is that a large majority of innovations from Amazon.com were technical and aimed primarily at improving performance. One of our goals with this framework is to create awareness for the "side effects" (more than one perspective of PERFA being affected) of innovation that can create an overall added or diminished customer value.

This leads us to our last point dealing with the underexplored potential of innovations. Every year countless innovations are brought to life and fail to gain market acceptance at a stunning rate ranging from 40% to 90%. While the creators had a specific purpose for the innovation, customers seems to not have resonated with it (c.f., Cierpicki et al., 2002; Griffin 1997). A possible reason for failure could be the innovation felt short of its potential. As the majority of innovations at Amazon.com were performance based, we wondered how they could have provided more value to customers than they did. Could they have combined more than just an improvement in quality or speed? We find particularly interesting how certain companies innovate by touching several of the PERFA perspectives. For example, iTunes from Apple allowed customers to buy single songs (novelty at the time) in a fast (no need to wait for the CD to arrive home - Performance category), easy (fully automated process online - ease of use category) and reliable (instant download of the right song without the risk of downloading viruses from torrent websites) manner. Furthermore, the whole buying process in iTunes was made in order to transmit the exclusive nature of the Apple brand (affectivity perspective always present in Apple products). We strongly believe that innovators should consider several ways to increase customer value proposition when at the "drawing board" stage. It is

our hope that the PERFA framework will help navigating the creation process through its 5 perspectives.

### 3.5.2. Limitations and suggestions for future research

Despite its contributions, our study has several limitations. The most obvious is the fact data was obtained from a single company. Thus, it is not possible to generalize the findings across organizations and industries at this stage. Further research should consider replicating a similar study in a different industry or test the validity of the PERFA framework in a different context.

Another limitation of this study is the fact data was collected from secondary sources. Primary data could have helped us uncover either new innovations that were not reported or understand better the root and development of existing innovations. Therefore, we did not observe or interrogate the decision makers at Amazon.com which may have further enhanced our understanding of the phenomenon of innovation. Furthermore, it is unlikely that the secondary data captured all innovations Amazon.com produced over the study period. However, Amazon.com is a well-studied case and highly present in the media. Thus, we believe innovations deemed most important were captured.

Another limitation relates to the research approach itself. Although exploratory case studies are frequently used in innovation research, there is still a lack of standardized approaches to data collection and analysis. Therefore, rigorous quantitative research is needed to make this research statistically generalizable.

This research focused on identifying value proposition elements, but did not focus on the relationships between them or the importance of individual elements in different contexts (such as product, industry or customer life cycle). Thus, further research should attempt to correlate the value proposition elements with the success of individual innovations.

In all, limitations of management tools aimed at helping practitioners make better decisions are common among the business literature, ranging from the popular balanced scorecard (Kaplan & Norton, 1992) to the SMART goals (Doran, 1981). If compared with the balanced scorecard (possibly the most influential and widely accepted performance measurement framework in the management literature), the PERFA framework provides an organized method concerning its application. On the other hand, the balanced scorecard is known for its lack of measurability, fuzziness and difficult application (Paranjape et al., 2006). Thus, while limitations apply, the PERFA framework provides an all-around and easy assessment tool for managers to evaluate the impact of their innovations on value proposition. As with similar frameworks, only the test of time and the number and variety of applications of the PERFA frameworks by scholarly authors and practitioners can fully validate its added value.

## 3.6. CONCLUSION

This research is one of the first to correlate value proposition and innovation. By contributing to a better understanding of the value proposition concept and its correlation with innovation, we obtained a framework which can help both academics and practitioners better understand the structure of a value proposition and its role in the innovation process.

It is customers who decide whether or not to purchase a certain product; therefore, innovations must be based on what customers truly value. Since managers are ultimately the decision-makers, our PERFA framework offers them guidance on what aspects to improve or innovate on their innovative offerings in order to generate value for their customers. A value-focused approach using our PERFA framework requires managers to rethink their perspective on innovation by putting themselves in the customer's shoes. In doing so, managers are able to identify key factors among the five perspectives of PERFA and make better decisions when deciding what to innovate so as to improve the value proposition for their customers.

The next chapter will provide examples of the application of the PERFA framework to a broad range of cases in order to assess its applicability in different contexts and industries. General findings and conclusions are then discussed.

# Chapter 4: APPLYING THE PERFA FRAMEWORK

Numerous frameworks and models have been proposed in recent decades as a tool to assist managers in analysis and decision making. Some such as Porter's five forces (Porter, 2008), balanced scorecard (Kaplan & Norton, 1992) or SWOT matrix (Hill & Westbrook, 1997) have stood the test of time and are, despite their shortcomings, continuously used in education, research and in companies. Academic literature agrees on the fact that usefulness of those models is the most important criterion for their evaluation. Yet, the factors that enable to assess the usefulness of a framework ex ante are under-explored. We suggest that such an assessment should focus on both the face validity and added value of the framework. We demonstrate this with the applications of the recently developed PERFA framework (Lindic & Silva, 2011). We demonstrate its applicability with 10 short vignettes of innovations in the past.

## 4.1. INTRODUCTION

Taking strategic decisions are a major challenge for managers given the competitive environment businesses operate in (Hough & White, 2003). Thus, strategic decision making has been exhaustively studied by scholars (Campbell et al., 2009; Taleb, 2007). Several frameworks have been suggested for the support of strategic decision making in various fields. Those frameworks range from the general-purpose tools for analysis (e.g. balanced scorecard or SWOT analysis) to frameworks for a specific purpose e.g. framework for supplier selection (Trkman & McCormack, 2009) or a process matrix for process standardization (Hall & Johnson, 2009) to list just a few out of many. Often the initial proposed framework is supported by a single case study (Lindic & Silva, 2011; Trkman & McCormack, 2009) or anecdotal evidence standardization (Hall & Johnson, 2009).

Some frameworks have stood the test of time. Thousands of citations for the balanced score card paper from Kaplan and Norton (1992) proves that it is highly relevant. That said, even popular frameworks such as SWOT have often been heavily criticized for the lack of their added value (Hill & Westbrook, 1997).

The PERFA framework touches one of the most important strategic decisions taken by managers - whether or not to introduce an innovation into the market (Miles & Snow, 1978). Innovations should always be assessed, among other factors, based upon the value they bring to their target customers versus existing alternatives on the market. In short, its value proposition needs to be clear. Thus, building upon chapter 3, we ask whether the PERFA framework's outcome from Amazon.com can be generalized to a wide variety of organizations. Specifically, we argue that strategic decisions toward innovation should take into consideration customer value proposition, making the PERFA framework an adequate tool for the task.

We use examples of 10 different companies to investigate through the PERFA framework lens how their past new product launches contributed towards the enhancement or hindering of customers' value proposition as well as the associated result.

## 4.2. APPLYING THE FRAMEWORK

While past research on new product development offers rich content on what criteria should be used to assess new product proposals (see, e.g., Carbonell et al., 2004; Cooper, 2008; Covin et al., 2001; Hart et al., 2003), the literature still lacks a simple framework to assist managers on their new product launch decisions. The PERFA framework provides an answer, but it needs to be tested on cases from a variety of industries. Thus, through 10 vignettes, our goal is to apply the PERFA framework to different companies and assess if its perspectives are relevant.

The cases were selected in a non-random, non-rigorous way to include the widest array of products / innovations (both successful and unsuccessful) from various industries. This selection follows our goal to use empirical observations to understand if the PERFA framework can be applied to organizations other than Amazon.com and what new can be learnt from or added to the framework. Data was collected via the companies' websites, online newspapers, forums of opinions as well as from practitioners and academic journals. Case-base evidence is used to develop an insight into the relationship between diverse companies' product launch and the PERFA framework. Each company's analysis is represented from figure 4.1 to 4.10. Note that "alternatives" refer to "average" which is illustrated by being at the center of each figure in light-blue color (level 3 out of 6). As it represents the benchmark in the eyes of the manager, the five perspectives of PERFA may rank either above (level superior to 3), below (Level bellow 3) or indifferently (equal to 3). As the SWOT analysis, this management tool is merely a guiding tool that may create awareness about aspects not thought of before its application.

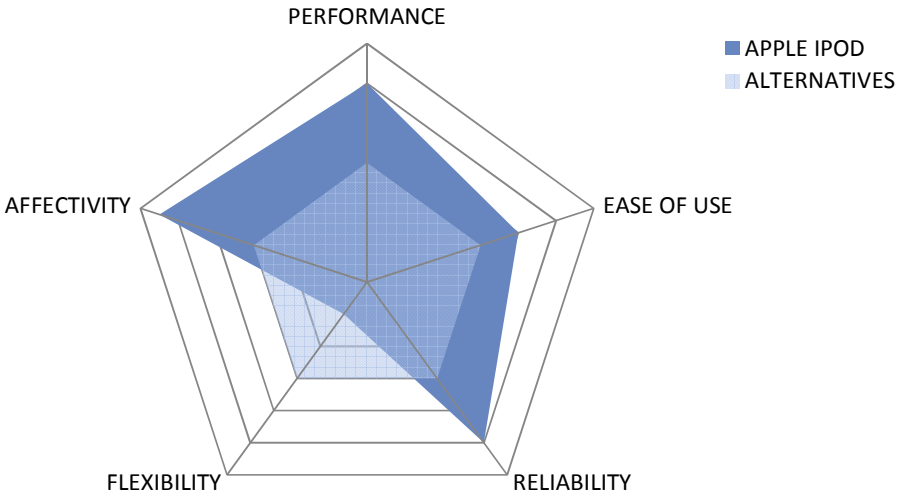
### 4.2.1. Apple iPod

Apple introduced the iPod media player on October 23, 2001. The iPod is a portable hardware that allows users to transfer digital content from a computer to the media player using iTunes (media player software that allows users to play, download, store, archive and organize digital audio and video files on desktop and laptop computers). The iPod introduction to consumers was marked by Apple promising customers with 1000 songs in your pocket (Aoaeh, 2011). With several MP3players on the market, Apple still decided to launch a product in a competitive market with existing players such as the MPMan (Sold more than 50.000 units in the first year of its launch in 1998), the Rio PMP300, Creative NOMAD Jukebox, Archos Jukebox, among many others. At the launch of the iPod in 2001, approximately 50 different portable mp3 players were available in the U.S. (Adner, 2012). While the success of the

Apple iPod among its competitors has been previously discussed (Abel, 2008), little has been proposed in order to explore the root of success of this innovation.

Figure 4.1 describes in short how Apple' launch of the Ipod positioned itself against competition through the PERFA lens. Facing a tough competition, Apple knew it had to bring out something more than just another MP3 player. In order to do so, they launched first the iTunes Media player software. This software allowed users to organize their music libraries in an easy and simple manner. When the iPod was launched, iTunes allowed users to update their Apple mobile music players automatically through the "Auto-Sync" feature, all these importantly influencing **ease of use**.

*Figure 4.1: PERFA analysis of the Apple iPod*




Additionally, iTunes offered thousands of songs for download at a marginal price of $1. Customers no longer needed to purchase a whole album, they now had the possibility to purchase only the songs they liked and instantaneously transfer them to their computers or iPods thus importantly influencing **flexibility**. Furthermore, while downloads and music transfers where known to be a slow process in the early 2000's, Apple' technology allowed for transfers up to 30 times faster (more **performance**) than existing alternatives on the market.

Besides an attractive design and size, it offered a **reliable** listening experience with no cuts (issue encountered in previous models and on the then still popular portable CD player devises).

Interestingly enough, Apple did not want its music downloads to be freely played in mobile devices other that the iPod. This clearly hinders customer value proposition. Less **flexibility** surely turned off certain customer, but Apple's decision leveraged upon the exclusive and premium nature of Apple products. In fact, Apple's customers are willing to compromise in

order to have something different. The emotional links between the brand and its customers is well known (Flavián & Guinalíu, 2005). Thus, it provides a perfect example of the **affective** meaning of the brand and associate product to its customers. In fact, when I enquired a class of 54 MBA students at the Thunderbird School of Global Management in Phoenix about their purchase of an Apple iPhone, all without exception revealed they did not even check the specification of the iPhone versus other alternatives on the market. Apple' emotional bond with its customers is surely an edge hard to replicate. A summary of the findings is presented below on table 4.1.

*Table 4.1: PERFA Framework Applied to the Apple iPod*

| PERFA Framework | Definition | Apple iPod |
|---|---|---|
| **Performance** | The way organizations work with the aim of serving best their customers while doing so profitably (Barnes et al., 2009). | The Only MP3 player offering the means for consumers to listen to, sample, and inexpensively purchase music songs online in an easy and legal manner. |
| | | Provide a large database of songs available for purchase |
| | | Allows downloads to be up to 30 times faster than USB-based players available at the time (Awbrey, 2001) |
| **Ease of Use** | Degree to which individuals believe using a certain system or product will be effort-free. | Harmony between hardware and software through the iTune music software management and purchase platform. |
| | | Ability to customize music purchase choices to one song instead of the whole album |
| | | Multi-language settings for international customers |
| | | Auto-Sync feature upon having the devise connected to the computer |
| | | Lightweight portable media player with a wide array of accessories that allows people to carry their digital content with them everywhere (running, on the beach, etc…) |
| **Reliability** | The ability of a product to deliver according to its specifications (Van Raaij and Pruyn, 1998). | Features up to 20 minutes of shock protection for nonstop playback when running, biking or other activities (Awbrey, 2001) |

| | | |
|---|---|---|
| **Flexibility** | Firm's ability to reallocate and reconfigure its organizational resources, processes and strategies as a response to environmental changes (Sánchez and Pérez, 2005) | iTunes Media Player and Music Store not compatible with other portable music players. |
| **Affectivity** | Feelings or emotions associated with working with a company or using its products and services. | Strong "Apple" brand identity |

### 4.2.2. Dell Aero Phone

The Dell Aero phone was launched in 2010 and retailed for $99 with a two-year contract from AT&T in the United States. The Aero was introduced with the Android software version 1.5, a 16 months out-of-date software as several devices at the time were already running the Android software version 2.2 (lack of comparative **performance**). By offering an outdated smartphone, Dell positioned itself as a sub-standard product (Raphael, 2010). While marketed as the lightest smartphone on the market, the screen size was considerably smaller than alternatives making it harder to type, watch movies or simply browse the internet (lack of **ease-of-use**).

Overall, the PERFA framework analysis in table 4.2 reveals the Dell Aero smartphone offers little value to customers compared with existing alternatives on the market. If the phone had been introduced 24 months earlier, it could have been a competitive offering. By blindly entering a red ocean market and by overvaluing their "Dell" umbrella (weak **affectivity**), it was doomed to failure (Oricchio, 2009). Several blogs, forums and review websites highly criticize the Dell Aero Smartphone and refer to the thousands of unsatisfied customers it generated. In March 2012, Dell announced it would stop selling smartphone in the US as a clear sign of failure of their smartphone strategy (Shah, 2012). Figure 4.2 gives an overview of the PERFA framework for the Dell Aero phone versus other alternatives on the market.

*Figure 4.2: PERFA analysis of the Dell Aero phone*

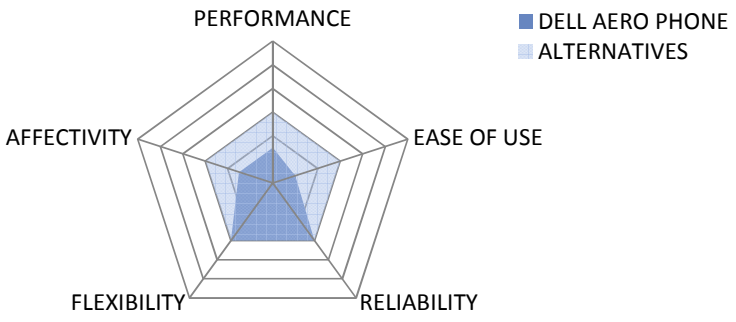


*Table 4.2: PERFA Framework Applied to the Dell Aero Phone*

| PERFA framework | Definition | Dell Aero Phone |
|---|---|---|
| **Performance** | The way organizations work with the aim of serving best their customers while doing so profitably (Barnes et al., 2009). | Lightest Smartphone on the market at time of Launch. |
| | | 16 months out of date and a lifetime behind in functionality and performance. |
| **Ease of Use** | Degree to which individuals believe using a certain system or product will be effort-free. | Smaller screen than standard makes it hard to use |
| **Reliability** | The ability of a product to deliver according to its specifications (Van Raaij and Pruyn, 1998). | No clear value proposition under this perspective. |
| **Flexibility** | Firm's ability to reallocate and reconfigure its organizational resources, processes and strategies as a response to environmental changes (Sánchez and Pérez, 2005). | Locked to AT&T |
| **Affectivity** | Feelings or emotions associated with working with a company or using its products and services. | Poor design and no hype associated with the brand. |

### 4.2.3. AirBnB.com

Airbnb is a website that matches people seeking vacation rentals and other short-term accommodation rental with private individuals willing to rent the property they regularly live in (Note: it may also include pure rental property). The site was founded in October 2007 and in July 2012 had over 200,000 listings in 26,000 cities and 192 countries. Visitors of the site can rent private rooms, entire apartments, castles, boats, bungalows, tree houses, among other types of properties (Luchs et al., 2011; Upbin, 2011).

AirBnB main value proposition to end users (guests) is based on its alternative nature to other accommodations websites that offer hotel rooms (i.e. booking.com). While hotels offer standard rooms, AirBnB offers a unique experience to meet and possibly discover a city with locals while spending time at their place.

AirBnB.com provides people seeking accommodation a large variety of options that go well beyond hotel accommodation websites such as Booking.com (**performs** better in terms of options to choose from). While Booking.com offers a total of 752 options for the Metropolitan Los Angeles, AirBnB.com offers more than 5000. However, using this service is more complicated for guests than simply booking a hotel room. Exchange of emails must occur, profiles must be read and an agreement between the host and guest must be reached (lack of **ease-of-use**).

AirBnB.com has suffered cases of fraud where apartments shown on the website were different than the one found by guests upon arrival despite the efforts from the company to verify renter's identity and real address. Furthermore, hosts can always decide to not rent their property last minute by not opening the door. Thus, this service is surely less reliable than simply booking a hotel room where chances of such occurrences are minimal (Lack of **reliability**). Obiously AirBnB.com is aware of that and is making deliberate efforts to address this issue. Availability calendars are updated in real time and Rooms/ apartments posted for rental must be verified by the "security" team of AirBnB.com. The website is **flexible** enough to allocate all kinds of properties ranging from house to boats. The web platform allows AirBnB.com virtually unlimited possibilities. However, this aspect of PERFA is not significantly different than other websites on the market.

Finally, hosting people is different from renting them a hotel room. Several friendships were made through AirBnB.com making both guests and host evermore willing to use the service again. The service goes well beyond renting a room or apartment for a short period of time, it becomes an opportunity for guest to experience how locals live by sharing their place of residents. Thus, **affectivity** seems to be the perspective where AirBnB.com finds its true advantage over competition.

Most offerings on the website appear to be cheaper than hotel alternatives. However, there seem to be a trend where customers are willing to pay a premium to experience something unique and authentic (i.e. renting an apartment where a celebrity used to live, renting a room in a boat, renting a tree-house of even a whole island) (Murg, 2012). Figure 4.3 provides an overall analysis of AirBnB.com through the PERFA framework and table 4.3 a summary.

*Figure 4.3: PERFA analysis of AirBnB.com*

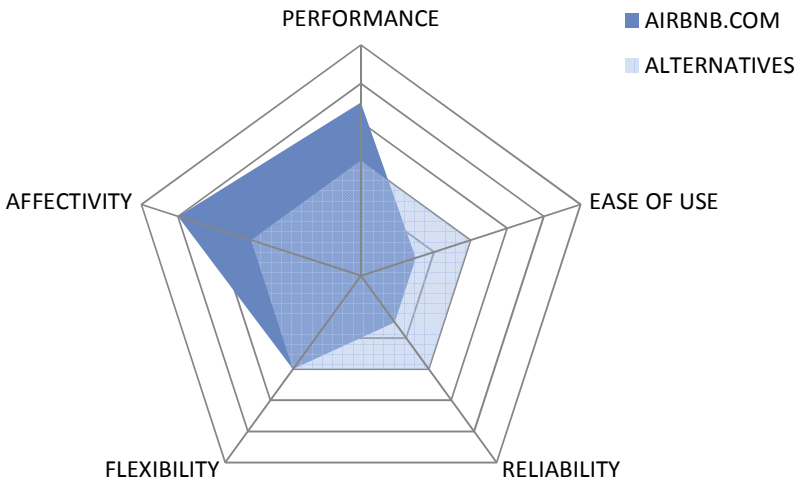


*Table 3.6: PERFA Framework Applied to AirBnB.com*

| PERFA framework | Definition | AirBnB |
|---|---|---|
| **Performance** | "Can my product perform better in terms of quality, technical specifications and / or features than the existing alternatives on the market? | Large number and variety of accommodations. |
| **Ease of Use** | "Is my product substantially easier to use than existing alternatives in the market?" | The process of booking a room is complex as it requires the creation of a personal profile, the exchange of emails as well as acceptance from hosts. |
| **Reliability** | Is my product more dependable and / or more accurate than existing products on the market?" | Fraud makes using AirBnB risky. |
| | | Hosts may simply decide to not open their door leaving guests at the door. |
| **Flexibility** | "Is my product ready to adapt to upcoming changes and thus be in advantage compared to existing alternatives on the market?" | N/A |
| **Affectivity** | Will my product generate a sense of belonging among its users that surpasses what is now offered on the market?" | Well beyond renting rooms, AirBnB.com has become the platform for friendship making, meeting new people while travelling and unique renting experience. |

### 4.2.4. Square

Square Inc. offers a revolutionary electronic payment service that allows users in the United States to accept credit cards payments through their mobile phones. This service was launched

in 2010 and is now compatible with the iPhone, iPod Touch, iPad and Android-based mobile phones. Of the five perspective of PERFA, **ease of use** is surely the main value proposition offered to its users. Square positions itself as a great payment device for small businesses that need portability and simplicity. It provides small business owners with a hassle-free way to accept credit cards payments and track sales on their phones or Apple devices (Bradley, 2009; Fitzgeorge-Parker, 2010; Stern, 2010). "Square was like answering a quick prayer" commented one of the users (Shih, 2012).

In terms of performance, the Square has several limitations such as being unable to provide refunds or void transactions from the device or being unable to store transactions offline in case of a loss in signal (Stern, 2010). Thus, compared with alternatives on the market, its technical specifications and features are a minus (**performance** issues). Furthermore, Square has been criticized for its susceptibility to fraud compared with traditional means of payment (Hsu, 2011), making it a less **reliable** option compared with traditional card readers. Conclusions of this analysis are summarized in figure 4.4 and table 4.4.

*Figure 4.4: PERFA analysis of Square*

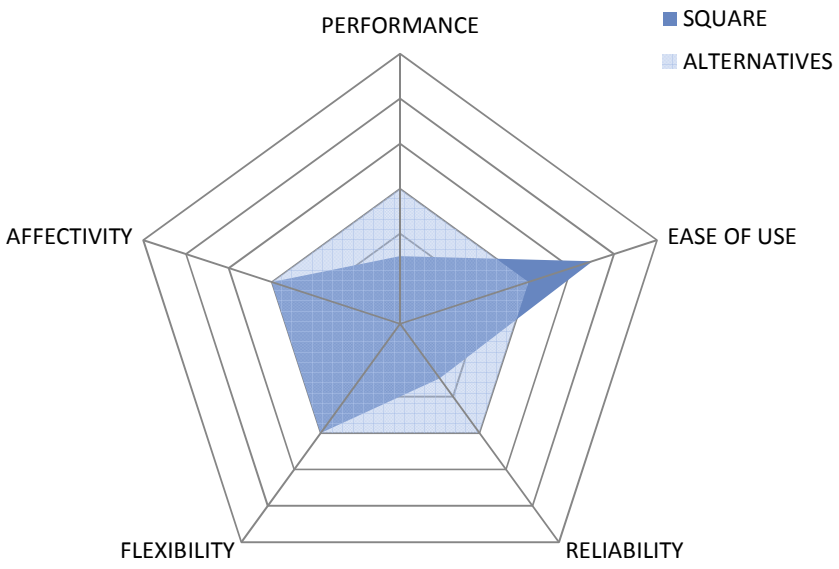


*Table 4.4: PERFA Framework Applied to Square*

| PERFA framework | Definition | Square |
|---|---|---|
| **Performance** | "Can my product perform better in terms of quality, technical specifications and / or features than the existing alternatives on the market? | Unable to provide refunds, unable to void transactions from the device and unable to store transactions offline in case of a loss in signal. |
| **Ease of Use** | "Is my product substantially easier to use than existing alternatives in the market?" | Transforms any iPhone / iPad in a payment station. |
| | | Easy to process and track sales. |
| **Reliability** | Is my product more dependable and / or more accurate than existing products on the market?" | More susceptible to fraud than traditional payment forms. |
| | | Dependent on a good network signal to work. |
| **Flexibility** | "Is my product ready to adapt to upcoming changes and thus be in advantage compared to existing alternatives on the market?" | Square will fit most Apple and Android mobile phone with few limitations – No major advantage over competition. |
| **Affectivity** | Will my product generate a sense of belonging among its users that surpasses what is now offered on the market?" | N/A |

### 4.2.5. Skull Candy

Skullcandy was founded in 2013. The company designs and markets headphones, MP3 player watches, audio accessories, and backpacks with built-in combo speakers and iPod controls. The main target customers of the company are outdoor action sports enthusiasts (i.e. snowboarders, skateboarders, etc…). Skullcandy products are sold through retailers, specialty outlets as well as through their own online webstore (more info at www.skullcandy.com).
Skullcandy is a great example of how the **affectivity** perspective in PERFA can be the main driver of success in a new product. Skull Candy decided in 2003 to enter a highly competitive market where strong established players offered a vast array of audio accessories. Originally, the focus of the company was its technology (**performance**), but it rapidly realized its real strength was as a hip, edgy brand that made a fashion statement for its users (**affectivity**). By carefully branding and targeting their products to an untapped niche among snowboarders, skateboarders and action-sports enthusiasts they were able to create a product that expresses a sense of belonging that far exceeded anything present on the market. SkullCandy' original and explicit designs rapidly caught the attention of teenagers who perceived the brand as "cool" (Bodhani, 2011).

Besides tapping on the affectivity perspective, they also designed headphones able to endure the harsh conditions experienced during extreme sports while still delivering quality sounds (**reliability**) (Nieva, 2011). By leveraging on a niche market and on the strong emotional bond of the brand, Skullcandy estimates that today 90% of its customers do not even practice extreme sports ("Success ByDesign Profile," 2010). A summary of the findings is presented below on figure 4.5 and table 4.5.

*Figure 4.5: PERFA analysis of SkullCandy*

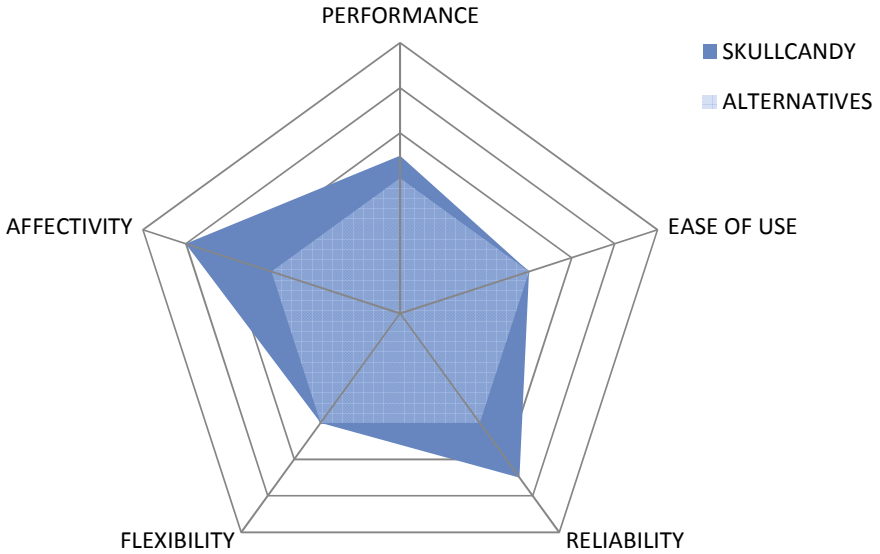


*Table 4.4:: PERFA Framework Applied to SkullCandy*

| PERFA framework | Definition | Skull Candy |
|---|---|---|
| **Performance** | "Can my product perform better in terms of quality, technical specifications and / or features than the existing alternatives on the market? | Durable headphones in order to endure shocks from extreme sports. |
| | | High quality sounds comparable with other top of the line brands. |
| **Ease of Use** | "Is my product substantially easier to use than existing alternatives in the market?" | N/A |
| **Reliability** | Is my product more dependable and / or more accurate than existing products on the market?" | High quality sound when engaging in outdoor action sports. |
| **Flexibility** | "Is my product ready to adapt to upcoming changes and thus be in advantage compared to existing alternatives on the market?" | N/A |
| **Affectivity** | Will my product generate a sense of belonging among its users that surpasses what is now offered on the market?" | A hip, edgy brand and designs that represents a fashion statement for its customers. |

### 4.2.6. Segway

The Segway two-wheel personal transportation vehicle was launched in 2002. After spending nearly $100 million developing the product, the company had only sold 30,000 units at the end of 2007 being considered by Time Magazine one of the 10 biggest tech failures of the last decade (McIntyre, 2009).

When analysed under the PERFA framework, Segway scooters appear to perform better than traditional scooters in terms of cost per mile. However, they only allow users to realize 38 kilometres per charge. Additionally, in case the battery runs out, it requires up to 10 hours of charging time when regular scooter only need a few minutes and pocket change to fill up their gas tank. Its 20 km per hour maximum speed make it a dangerous option to ride on the busy roads of most American cities (Greenberg, 2008). With marginal advantages compared with regular scooters, the **performance** aspect of Segway seemed relatively weak.

Using the Segway is also a complex mater as it may require a license / training (lack of **ease-of-use**) and in some countries it is not allowed on the road (Beckford, 2011). Additionally, driving a Segway has been considered dangerous and not safe enough for road use. While it does represent a green alternative to gas powered transportation means, there are safer and more **reliable** means to get from one point to another without harming the environment such as bicycles, electric scooters (higher range per charge) or public transportation (deQuetteville, 2010).

An attempt to trigger the **affectivity** perspective of PERFA was made given its modern looks and "green" label. However, only a limited number of early adopters became "ambassadors" of the brand. Although the company tried to improve affectivity by e.g. organizing annual Segway fests and it worked for some (a typical quote expressing affectivity can be found on of the forum posts from 2004: "One of the unexpected delights of last year's SegwayFest was the interaction of all the passionate people that are owners. They came from every walk of life and every persuasion but what united us was a common vision and uncanny interest in man and machine. There was a giddiness in the air and a very strong spirit of commeraderie"). Still, this did not get off the ground and in fact, the Segways Enthusiast Group of America disbanded in 2007 due to lack of interest and consequent inactivity from its members ("Segway Fan Club Disbands Due to Lack of Interest | Fox News," 2011).

Segway's apparent failures in the market (McIntyre, 2009) lead it to consider an alternative target market: People with disabilities (Carroll, 2013). Segway may be a good device for people with disabilities because it allows them to participate in social and functional activities in a manner that traditional mobility aids do not facilitate as well (Sawatzky et al., 2009). As the target customer changes, so does existing alternatives in the market (competition) and the value proposition the product offers. A summary of the findings is presented on figure 4.6 and table 4.6.

*Figure 4.6: PERFA analysis of Segway*

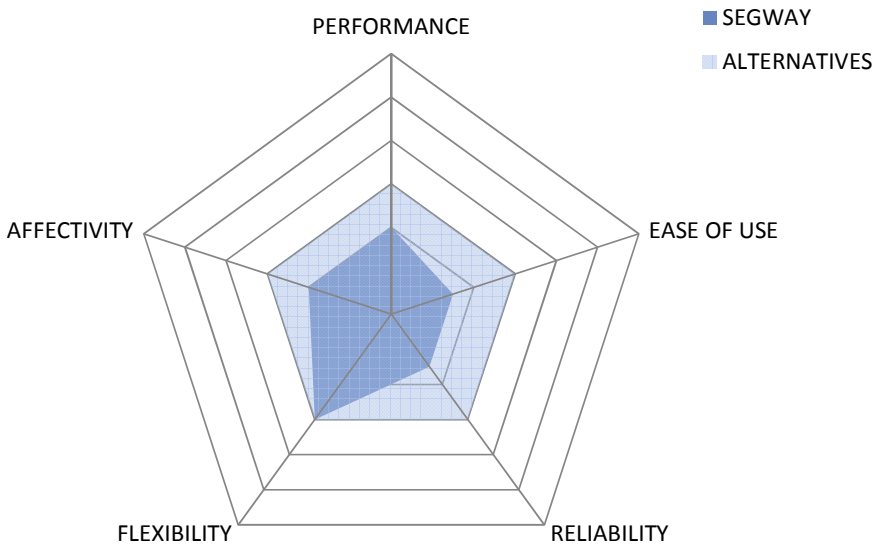


Table 4.6: PERFA Framework Applied to Segway

| PERFA framework | Definition | Segway |
|---|---|---|
| **Performance** | "Can my product perform better in terms of quality, technical specifications and / or features than the existing alternatives on the market? | More efficient in terms of miles per energy compared with existing alternatives. |
| | | Only 12.5 mph maximum. |
| | | No storage space. |
| | | Only 24 miles per charge. |
| | | Generates less greenhouse effect than a car or motorbike. |
| **Ease of Use** | "Is my product substantially easier to use than existing alternatives in the market?" | Requires equilibrium and is referred by many as dangerous. |
| | | Requires 8/10 hours to fully charge. |
| | | Requires a license in some countries and in others is not allowed in the streets. |
| **Reliability** | Is my product more dependable and / or more accurate than existing products on the market?" | Requires frequent charges to operate regularly. |
| **Flexibility** | "Is my product ready to adapt to upcoming changes and thus be in advantage compared to existing alternatives on the market?" | N/A |
| **Affectivity** | Will my product generate a sense of belonging among its users that surpasses what is now offered on the market?" | Weak and dispersed fan club. |

### 4.2.7. Couple Mobile Software App

Couple is a mobile software application for Apple and Android phones. It provides a mobile messaging service between only two people, usually couples (Stross, 2012). The application allows users to privately share text, photos, video and other content with each other (MacMillan, 2012).

Interestingly, the app faced from the very first day fierce competition from rival apps "WhatsApp", "Path", "Facebook Messenger", and "KakaoTalk". Given the "red ocean" (Kim & Mauborgne, 2005) nature of this business, it had to come up with features or a bring that distance itself from other established players. Couple did so by limiting the app to only two users. While it may seem as a limitation at first glance, this unique feature allowed Couple to brand itself as the app for "lovers". Furthermore, given its niche nature, Couple added features that allowed it to **perform** well beyond simple texting or sharing of pictures. Ranging from drawings to "thumbkisses" (more information at http://trycouple.com), the app appealed to a very specific but still large target audience.

As **ease of use** is concerned, lovers can share private information in seconds without having to consult their contact list as Couple is a stand alone app with that purpose only. Consequently as all information inserted is made available only between two people, it **reliably** delivers the message to the right phone owner every time with no possibility for mistakes. Figure 4.7. provides an overview of the app versus other alternatives at the time of the launch (as several copy-cats have emerged since then) and table 4.7 a summary of our findings.

*Figure 4.7: PERFA analysis of Couple mobile software app*

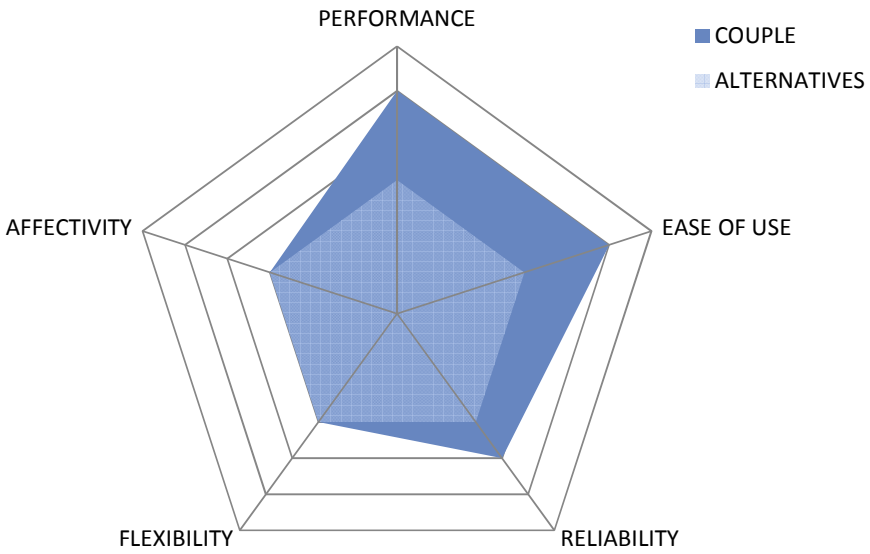


Table 4.7: PERFA Framework Applied to Couple mobile software app

| PERFA framework | Definition | Couple |
|---|---|---|
| **Performance** | "Can my product perform better in terms of quality, technical specifications and / or features than the existing alternatives on the market? | Offers communication features customized for its target customer: couples. |
| **Ease of Use** | "Is my product substantially easier to use than existing alternatives in the market?" | The easiest way for couples to share messages, videos, pictures and tasks in a simple and private way. |
| **Reliability** | Is my product more dependable and / or more accurate than existing products on the market?" | Reliably delivers the information from one user to another, 100% of the time. If the user is offline, it stores the data and delivers it as soon as the device connects with the internet again. |
| **Flexibility** | "Is my product ready to adapt to upcoming changes and thus be in advantage compared to existing alternatives on the market?" | N/A |
| **Affectivity** | Will my product generate a sense of belonging among its users that surpasses what is now offered on the market?" | N/A |

### 4.2.8. KitesurfAlert.com

As meteorological forecasts for wind conditions are far from accurate (Wu & Hong, 2007), Kitesurf Alert was built to solve the problem. KitesurfAlert.com is a wind report iPhone software application that allows users to view and share wind conditions in real time in an interactive map on the iPhone (for more information visit www.kitesurfalert.com). By having real people reporting the wind conditions, users know with accuracy what can be expected at that specific location.

As **ease of use** is concerned, it only takes an iPhone, internet and a few seconds to share or view wind reports posted by other kitesurfers. There is no need to consult complicated meteorological wind reports to obtain information, call local establishments (bar or surf school) on the beach or guess who is at the spot to ask about the wind conditions.

KitesurfAlert reports is more **reliable** (if a report is posted) than any other wind report software available as it is generated by real people who post reports in real time. By having reports from other fellow kitesurfers that are located on the spot represents the most accurate way to know wind conditions for a specific place at a specific time. However, as of today, the limited number of regular users limits considerably its value to users in terms reliability. In fact, the success of this app will depend more on the network effect of a mass of users than on the technological aspects of the app. As performance is concerned, other iPhone software application offer more details on the wind conditions such as wind direction or even live sttreaming from the beach.

**Affectivity** is a big part of the marketing and buzz KitesurfAlert received early on. The software application is founded on the premises that the application was built by Kitesurfers, for Kitesurfers. By targeting a very specific niche of users, early-adopters have a strong feeling of belonging and are proud on being part of a community of "Kitesurfers" – a growing, exclusive and trendy extreme sport. A summary of the findings is presented on figure 4.8 and table 4.8.

*Figure 4.8: PERFA analysis of Kitesurf Alert*

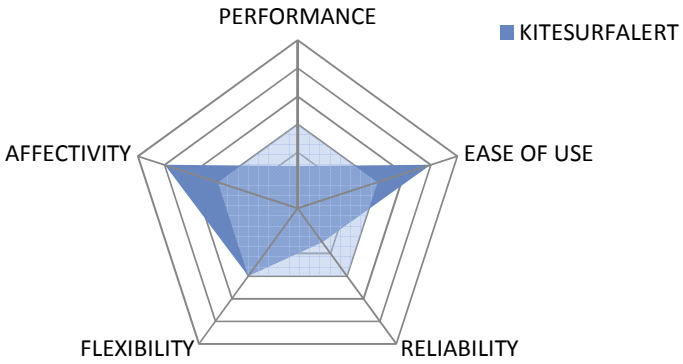


*Table 4.8: PERFA Framework Applied to Kitesurf Alert*

| PERFA framework | Definition | Kitesurf Alert |
|---|---|---|
| **Performance** | "Can my product perform better in terms of quality, technical specifications and / or features than the existing alternatives on the market? | Lack of features compared with alternatives on the market. |
| **Ease of Use** | "Is my product substantially easier to use than existing alternatives in the market?" | It only takes a few seconds to share or view wind reports posted by other kitesurfers. |
| **Reliability** | Is my product more dependable and / or more accurate than existing products on the market?" | Strong accuracy on wind conditions when a report is posted but not reliable due to the limited number of total users actively using the software. |
| **Flexibility** | "Is my product ready to adapt to upcoming changes and thus be in advantage compared to existing alternatives in the market?" | N/A |
| **Affectivity** | Will my product generate a sense of belonging among its users that surpasses what is now offered on the market?" | Strong feeling of community and help among kitesurfers. |

### 4.2.9. HP Touchpad

Hewlett-Packard's TouchPad tablet computer was one of the year's 2011 most expected gadgets and considered a real threat to Apple and its popular iPad. Introduced in 2011, early reviews revealed a bright future for the device (Mossberg, 2011). The New York Times journalist David Pogue even commented "It works beautifully, and conveys far more information than the iPad 2. The tablet offers "real multitasking" with all open apps always running (Cox, 2011). Instead, the upstart tablet revealed to be 2011's "biggest flops." After just seven weeks of sales, HP decided to pull the tabled out due to weak sales.

When looking at the PERFA framework, HP had a great challenge as it wanted to compete with players such as Google and Apple. Both companies employ a massive amount of highly qualified programmers and engineers (possibly the best in the world) making it difficult for HP to compete in terms of **performance** (Mangalindan, 2012; Zeman, 2012). Additionally, the operating system (OS) of the HP tablet, WebOS, was technically inferior to Apple's OS (Biggs, 2011, 2012; Chen, 2012; Couts, 2011; Mossberg, 2011).

In terms of **ease-of-use**, reviews reveal users found it harder to use that an iPad ("Customer Reviews - HP TouchPad Wi-Fi 32 GB 9.7-Inch Tablet Computer," 2012; Mossberg, 2011). Instead of taking advantage of standards "user experience" features, the WebOS was truly unique requiring users to spend several hours learning how to use the device properly. Most positive reviews on the device were from customers who changed the original factory settings and converted the HP Touchpad to an Android OS device. Clearly, the tablet required a certain amount of technical skills to be of a satisfactory nature to its users (Isaac, 2011; Tofel, 2012).

In terms of **flexibility**, the HP operating system was very specific and offered little warrantees of future updates and upgrades as it was the first tablet sold by HP (Epps, 2011). Thus, the flexibility perspective rated negatively in customer's perception of value. As affectivity is concerned, it is very hard for any brand to compete with Apple products under this perspective. A summary of the findings is presented below on figure 4.9 and table 4.9.

*Figure 4.9: PERFA analysis of the HP Touchpad*

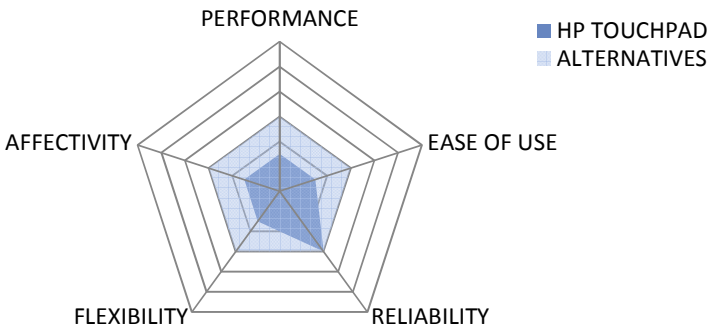


*Table 4.9: PERFA Framework Applied to the HP TouchPad*

| Performance | Definition | HP Touchpad |
|---|---|---|
| **Performance** | "Can my product perform better in terms of quality, technical specifications and / or features than the existing alternatives on the market? | Technologically inferior to existing alternatives. |
| | | Outdated software compared with existing alternatives. |
| **Ease of Use** | "Is my product substantially easier to use than existing alternatives in the market?" | Negative reviews from users. |
| | | Required the complex installation of non-official software to please customers. |
| **Reliability** | "Is my product more dependable and / or more accurate than existing products on the market?" | N/A |
| **Flexibility** | "Is my product ready to adapt to upcoming changes and thus be in advantage compared to existing alternatives on the market?" | Very specific (own operating system) and offered little warrantees of future updates and upgrades. |
| **Affectivity** | "Will my product generate a sense of belonging among its users that surpasses what is now offered on the market? | Limited to no affectivity for the HP brand. |

### 4.2.10. FON Wireless Broadband

FON is present worldwide and offers wireless broadband connectivity through the wireless routers located in the house of end customers across the globe. Labeled as the "crowdsourced WiFi internet", the "FON" community has more than seven million FON Spots worldwide. The way it works is as follows: end-users agree to share part of their own internet wireless broadband at home (which becomes a wireless FON Spot) and in return receive free roaming at FON Spots worldwide (see e.g. Su, Hwang, and Yeh (2008)). With strong existing player already providing internet services, the company took the partner route by forming alliances with existing home broadband internet providers.

Internet connection away from home used to be provided mainly by either: 1) cell-phone carriers, 2) local establishment or internet café offering Wi-Fi connection, 3) paid hotspots or 4) municipal wireless projects serving public places. The first option required users to have a mobile internet contract as well as a compatible devise (SIM card reader or USB wireless key). Besides the limited speed at which information can be transmitted via mobile connection, its use is usually limited to a certain amount of information exchange and typically expensive (Hill, 2012). As the second option is concerned, seeking free wireless connection at local establishments can be challenging. The third option is usually available in places where there is a strong affluence of people such as airports or main avenues where tourists are expected. The fourth alternative is usually only available within a limited geographic location (Potter et al., 2008).

In terms of **performance**, home broadband connection shared via FON service is usually faster and of better quality than the one provided by most municipal wireless projects but much slower than: the ones provided by 4G mobile internet, most hotels or workplaces and paid hotspots. While FON members can connect all their wireless compatible devises to the nearest FON hotspot and in seconds be online (**ease-of-use**), 4G mobile internet offers on demand connection anytime, anywhere.

As **reliability** is concerned, FON is a growing network with more than seven million hotspots. In Central London for example, users can virtually access FON from anywhere in the city as can be seen on their website at http://maps.FON.com. However, to date, FON lacks reliability compared with mobile broadband services as it is only available if a home or business within a short distance has the service activated. Reliability is thus the weakest perspective in our analysis as FON's business model depends on community members making their internet connection an available hotspot.

Based on a win-win philosophy, FON has been enthusiastically embraced and promoted by its users (affectivity). Several have spent considerable hours contributing to forums and blogs in order to help and grow the FON community. While FON seems keen on building a network of proud members to keep the momentum going, users have voiced their dissatisfaction towards

FON's corporate vision. With limited incentives for FON users to keep their service active, the future of the company is rather uncertain (Markendahl & Makitalo, 2007).

Overall, as internet access on mobile devices becomes commoditized, there will be few benefits associated with the FON service and little reasons for it to continue to operate. Figure 4.10 and table 4.10 summarizes our analysis.

*Figure 4.10: PERFA analysis of the FON service*

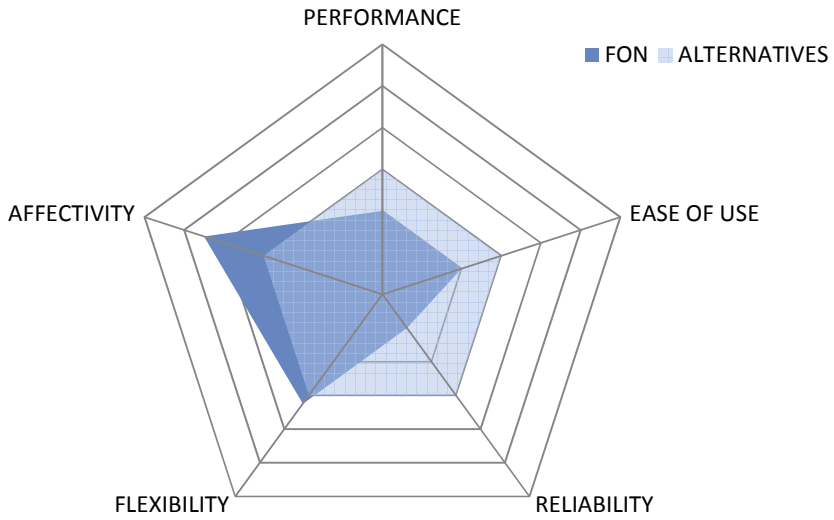


*Table 4.10: PERFA Framework Applied to the FON service*

| PERFA framework | Definition | FON |
|---|---|---|
| **Performance** | "Can my product perform better in terms of quality, technical specifications and / or features than the existing alternatives on the market? | Slower connection than 4G mobile broadband but faster than municipal connections. |
| **Ease of Use** | "Is my product substantially easier to use than existing alternatives in the market?" | No login or credit card details required, the devise automatically connects to the nearest FON Hot Spot. However, 4G phones can have internet access in second anytime, anywhere. |
| **Reliability** | Is my product more dependable and / or more accurate than existing products on the market?" | Availability limited to existing Hot-Spots. |
| **Flexibility** | "Is my product ready to adapt to upcoming changes and thus be in advantage compared to existing alternatives on the market?" | Wireless internet technology is less likely to suffer major changes versus mobile internet. |
| **Affectivity** | Will my product generate a sense of belonging among its users that surpasses what is now offered on the market?" | Sense of ownership of the brand by users / distributors of the service. |

## 4.3. CONCLUDING NOTES

Overall, the 10 cases analysis took into consideration different types of companies. While the cases were selected in a non-random manner, their diversity reveals the multiple applications PERFA framework can have in practice. From very successful innovations (Apple iTunes) to total failure (Dell Aero Phone), we tried to give a wide ranges of applications of the framework. Few interesting insights were learned throughout the process. For example, while we strongly believed after concluding the research on Amazon.com that offering enhanced value proposition to clients was the way to go, Apple proved us wrong. By deliberately not making their product flexible (Less flexibility than other offerings on the market as they wanted iTunes song to play only on iPods initially), they made their content (music) exclusive to Apple products. Interestingly enough, the lack of flexibility on one side triggered the "Affectivity" perspective by making the Apple iPod more exclusive and premium as only Apple customers could benefit from the benefits of the iTunes store.

AirBnB.com led us to consider whether the "price" perspective was missing in the PERFA framework. Indeed the service offers a unique experience where guests do not stay in hotels but emerge themselves in the lifestyle of the person who is renting the apartment. However, when looking closely at their website and specifically the market where one of the others uses the service, the price point seems to be a big trigger for the use of AirBnB.com. Thus, where and how would the "price" perspective fit within the PERFA framework? Thus, it triggered us to consider their new perspective and understand how it could navigate among all other elements of the framework.

Square.com made us consider whether certain perspectives of the PERFA framework have a stronger impact on the overall customer value proposition. When payments are concerned, security and reliability are at premium. Thus, even if Square would excel at all perspectives of PERFA but would lack reliability in a significant manner, it would simply be a "no-go" as customers and businesses would never trust an unreliable means of payment. Thus, we question to what extent Perspectives of PERFA can become "Sine qua non" conditions for the success of an innovation.

Similarly, the cases of Kitesurf Alert and Fon highly depend on network effects (value is created by the total number of users (Shapiro & Varian, 1999) that drive the performance and reliability perspectives. Without such, both products have a very little value for users as they depend on users themselves. Thus, network effects seem to dictate the success or failure of such innovations. Thus, the question is how to maximize network effects? While further research needs to be done in this area, we believe that at the product level network effects can be motivated by having companies excel at the 3 other perspectives of PERFA that do not directly result from network effects: ease of use, flexibility and affectivity. By doing so, users will be more willing to use and share the innovation among their peers.

The Segway case allowed us to understand how crucial it is for a company to clearly define who the target customer is. Given PERFA's customer oriented nature, we realized that altering the target customer of the company will dramatically change the shape of the frameworks' radar chart. Specifically, Segway past failure as a transportation device for the general public may become a success for people with disabilities. By simply redefining the target customer group, the PERFA framework dramatically changes given its customer-centric nature. Thus, we question to what extend the PERFA framework can be useful for marketing managers who are reformulating target market strategies.

While insights were obtained from these 10 cases, it would be interesting to question customers themselves and realize to what extend each of the 5 perspectives of PERFA are relevant for each situation. Thus, quantitative research would be the next step in bringing more validity to this framework. In all, PERFA is easily applicable and brings valuable insights that will hopefully guide managers in considering more and better alternatives before innovating.

# Chapter 5: GENERAL DISCUSSION AND CONCLUSIONS

## 5.1. SUMMARY OF FINDINGS AND CONTRIBUTIONS

As e-business and the "new economy" were prospering during the hype of the late 90's and early 2000's, business model become a popular term among both academic and practitioners. Some believed the disruptive power of internet would make traditional rules of business obsolete (Colombo & Delmastro, 2001). Old ways of doing business would give place to innovative ICTs driven business models. With the dot-come bubble burst, business failures were stereotypically associated to a wrong or faulty business model. Since the emergence of the term to date, the meaning and use of the business model terminology has remained fuzzy at best.

Overall, the focus of my PhD thesis deals with understanding the meaning of the business model concept through an historical analysis rooted in the resources based view and transaction costs theory as well as its application and usefulness.

In this dissertation, I attempt to provide the literature a clear path for future research in the field of business models and its correlation with strategic concepts and practice. I wanted to clarify what a business model is by delineating it from the field of strategy in general and its correlation with other relevant concepts in both the Strategy and IS literature. Throughout the dissertation, I provide different perspectives on business models and its components, both theoretically as well as empirically.

At a conceptual level, I bring to the literature an innovative perspective on how business models correlate with strategy and dynamic capabilities. Framework 1.2 and 1.3 open several new avenues for research within the debate of what is strategy in dynamic environments, how does it correlates with dynamic capabilities, and how are both concepts bounded (where one starts and where one finishes). This research direction was opened by the work of Pavlou and El Sawy (2011) and Barreto (2010) on dynamic capabilities but still requires further clarification. I strongly believe research on business models will evolve in this direction over the next few years.

In order to expose how different business models generate different outcomes (Chapter 2), I attempted to understand how companies leveraged the same innovative technology (cloud computing) for different purposes. The lessons learned provide not only strong managerial implications for both strategy and IS professionals, but also provide an empirical base for future developments that correlate innovation, disruptive technology and business models.

Given the popularity in use of the business model terminology among journalists and consultants, I strived to bring to the practitioner's community a useful tool that would be ingrained on empirical research. As value to customer is the core from which business models

gravitate around, I focused on my third chapter on decomposing the value proposition concept into a practical and hands-on framework. Through the case study methodology, Amazon.com's innovations were studied in order to deduce a framework aimed at helping managers make better decisions when formulating new (or simply revising) existing business models.

All three chapters together bring both theoretical as well as practical insights that contribute towards a better understanding, conceptualization and application of business models to both IT and non-IT enterprises. In line with the work of Osterwalder and Pigneur (2013) who argue IS research, specifically on business models, will have a dramatic impact in the strategic management field; my work is pioneer in the sense it was one of the first to cement various concepts, such as strategy and business model, and their inter-relationships in a theoretical manner.

## 5.2. OVERREACHING CONCLUSIONS

This dissertation aims at providing an historical and theoretical understanding of the business model terminology within the management and IS literature context, its applications in practice and the understanding of its core foundation, value proposition. Following Smith (1997) view of a theoretical contribution, this research aims at advancing the theoretical understanding of the business model. As Van de Ven (1989) echoed the work of Lewin (1945), "Good theory is practical precisely because it advances knowledge in a scientific discipline, guides research toward crucial questions, and enlightens the profession of management" (p. 486).

In chapter 1, I provided a first step in bridging the IS and strategic management literatures. Feat congruent with the recently published article by the world famous experts on the topic, Osterwalder and Pigneur (2013), who suggest that strategic management research could highly benefits from IS research and literature.

Furthermore, I contributed towards the clarification of the meaning of the business model term within the literature and provided a strong basis for upcoming theoretical and empirical research. By historically analyzing the evolution of the business model and contrasting its meaning against other popular terms, I was able to clarify the meaning and use of the business model over time. The result is a clear definition, grounded on the literature, of what distinguishes the business model terminology from other relevant concepts: strategy, revenue model, economic model, business concept and business process modeling. A distinction that, to the best of my knowledge, was not present in the literature to date.
At a theoretical level, I deduced based on an historical analysis the meaning of business models through the RBV and TCE theories. Furthermore, I provide a framework that positions and correlates business models with two other highly relevant management concepts: strategy and dynamic capabilities. The nature of the framework not only advances

knowledge in the field but also opens several avenues for further research to build upon. Findings suggest that when strategic decisions are made, chain reactions (represented by the gears in figure 1.2 and 1.3) will influence the organization's development of dynamic capabilities and consequent business models. Conversely, occurrences in the environment where the organization operates will also produce effects that will set boundaries to the development of dynamic capabilities and consequent formulation of strategies. This logical relationship and explanation between business models and two highly important concepts in the strategic management literature (strategy and dynamic capabilities) represent the core contribution of this dissertation. Furthermore, as I have clearly distinguished the business model from other relevant terms, I expect past misunderstandings to now be clear. Thus, I provide a clear page for future research to build upon.

The understanding of the business model terminology and its applications in practice were then expanded in chapter 2. Here I explore the impact of different business models in technology based organizations. As the cloud computing technology emerged and opened a new set of opportunities (as well as threats), business models needed to be modified or added. I explored how blinkered strategies lead a major player to lose its primacy by continuing to operate with a business model that was becoming inappropriate due to the shift in customer's value proposition caused by the development of new technology. I further highlighted the importance of organizations to question their existing business models in the face of technological change, no matter how successful they are. While the contribution of this chapter is mainly empirical, its elaboration greatly helped me revise and improve chapter 1. Throughout the writings of this chapter, I realized how distinct business models applied to the same technology generate dramatically different outcomes. It triggered my curiosity beyond a simple clarification and distinction of the meaning of the term (as it was specified in the research proposal submitted at the start of my Ph.D. Journey). It led me to question not only the meaning, but also how business models correlate, influence and are influenced by the organization and its environment. Specifically, when I illustrated through the case of Amazon.com how unexplored dynamic capabilities became a source of competitive advantage, it prompted me to revise my first chapter and consequently create Figure 1.2 and 1.3.

Finally, chapter 3 deducts from innovations a tool aimed at helping managers make better decisions. At the core of any business model is the value it generates for customers, known as value proposition. Based on a rigorous case study of Amazon.com, I was able to generate a theoretically grounded framework with high managerial implications. While companies operating today already have a business model in place (whether they acknowledge it as a business model or not), they may not be operating with the proper business model that best serves customers' interests. While complex, at its core a company's business model must provide customers with value that surpasses existing alternatives available on the market (value proposition). Thus in the final section of this dissertation I not only contributed towards the literature on value proposition by decomposing it into five perspectives, I also provided a

tool that contributes towards the first step in business model generation or modification. I illustrated the use of the resulting framework (PERFA) in 10 examples of various technological innovations.

## 5.3. MANAGERIAL IMPLICATIONS

In each chapter, implications for practice are pointed out. However, as a whole, this dissertation also offers some overarching managerial implications.

By exposing the meaning of the business model, my aim is to end the confusion and misuse of the term among both academics as well as practitioners. Managers are frequently unaware of what exactly their business model is, how it differs from their strategy and where it fits within their business as a whole. This dissertation helps in addressing these concerns as it offers a concrete definition of what a business model is and what it is not by comparing it with often misused terms in the literature. It also provides practitioners with a clear picture on how to frame a business model within their organization. I clearly positioned the business model within the organization by correlating it with the concept of strategy and dynamic capabilities (Figure 1.2 and 1.3 and the practical example presented in figure 1.5).

Furthermore, to thrive, managers need to select the right business models in order to face present circumstance (adequate business models for today) while constantly nurturing new and innovative dynamic capabilities able to respond to upcoming contingencies (in order to modify today's business models into tomorrows' business models). In all, this case study analysis revealed managers need to have a proactive attitude towards business model creation and modification. Furthermore, I uncovered, congruent with Christensen (1997), that novel and disruptive technology is not per se the cause of demise of large corporations. Instead, the ability to modify, radically implement or "invent" new business models is crucial for the prosperity of organizations operating in dynamic environments.

Another important managerial implication resides in the value proposition framework that resulted from this dissertation – the PERFA framework. Business models need to bring value to customers and thus new product launches or innovations have to take into consideration what specific elements will be appreciated by the customer. Our framework provides guidance to managers when assessing value proposition of their existing and upcoming products versus existing alternatives in the marketplace.

## 5.4. LIMITATIONS AND FUTURE RESEARCH SUGGESTIONS

One limitation of this research as a whole passes by its qualitative nature, a common thread in business model research. Thus, further research on business models should have a quantitative nature in order to bring objectivity to this field of research. Specifically, I suggest the use of content analysis. It is important to show how the concept of business model has been

perceived by the academic community and how consensus concerning its meaning has evolved during the different stages of its historical development. Thus, changes in the structure of the definition of business models, the key terms that have shaped it, and how its evolution has fostered the emergence of new research topics in the management and innovation fields over the years is a worthy research endeavour to build upon this dissertation.

While I did establish a clear relationship between strategy, dynamic capabilities and business models; I believe this framework will evolve further and become the basis for research in this field. For example, the work of Pavlou and El Sawy (2011) where they explore the role and meaning of dynamic capabilities could complement our work. As they expose the "black box" of dynamic capabilities, further considerations could be made as to how their framework fits within our perspective. One could argue that operational capabilities are expressed through a company's business model as a result of the company's dynamic capabilities. In the same manner, the work of Barreto (2010) on dynamic capabilities challenges the assumption that higher levels of dynamic capabilities lead to higher performance. The author refers to internal and external factors that bound the potential application of dynamic capabilities. I believe the answer to the boundary Barreto refers to is materialized through the business model employed by a company. These and other correlations will represent, in my opinion, the basis for future research in the fields of dynamic capabilities and business models.

While good social science is problem driven and not methodology driven (Flyvbjerg, 2006), the choice of the case study methodology and its reliance on secondary data in chapters 2 and 3 has limitations. However, the goal of both chapters were not to offer statistical generalization, but an analytical generalization in order to expand and generalize theories (Bickman & Rog, 1998; Gummesson, 1997; Scapens, 1990; Yin, 2003). In fact, case research is appropriate in areas where research and theory are at their early formative stages (Benbasat et al., 1987). The IS area of research is well known for its constant technological change. Thus, researchers in this field usually study innovations or novel phenomenon's by observing practitioners, rather than by formulating the initial wisdom to explain such (Benbasat et al., 1987). In fact studying how organizations were dealing with the disruptive power of cloud computing through the business model lens in chapter 2 allowed me to substantially revise and improve chapter 1. By observing through and commenting on how different business models using the same core technologies had different outcomes, it triggered my curiosity to dig into the strategic management literature. The result was the creation of a conceptual relationship between strategy, dynamic capabilities and business models (Figures 1.2 and 1.3).

In chapter 3, I attempted to generalize our exploratory findings from the single case study based on Amazon.com's innovations to ten other companies / products. While a single case analysis provided practical insights on how to assess the concept of value proposition, further research quantifying the value of each one of the five perspectives would greatly enhance the reliability and value of the framework. Thus, an upcoming research should apply the PERFA framework to a wide variety of innovations from different industries and quantify the

relevance of each perspective to the innovation (i.e. through customer surveys who actually bought the new product or innovation).

In Chapter 4 I applied the PERFA framework to 10 brief cases. However, I acknowledge that by themselves, they do not represent a rigorous test of validity of the framework. They simply provide a practical picture of how the framework can be successfully applied to other organizations or products, and open avenues for further research.

Another interesting topic is the value of frameworks and models in general for ex-ante predictions. While I demonstrated the value of our frameworks for ex post analysis of several cases in all three chapters of the thesis (e.g. Ryanair, Amazon, Siebel and the 10 cases with PERFA), such a retrospective analysis is subject to bias. The real challenge to any theory, especially if it is to be useful managerially, is how it performs predictively (Danneels, 2004). Can the theory be used not only to analyse cases post hoc but also to predict the outcome of cases ex ante? Upcoming work should dwell on answering such question by studying popular ex-ante frameworks (i.e. Porter five forces) and understanding their principles in order to apply it to our own work.

## 5.5. CONCLUSIONS

In all, I hope my research materialized through this dissertation and resulting academic articles will importantly contribute to a better understanding of a business model term and have an impact in the literature and among practitioners. More specifically: what a business model is, why it is important for both IT and non-IT companies, how business models can inform the study of successful and unsuccessful transformations due or despite new technology advancements and how can the value proposition of disruptive technologies be analysed either ex-post or ex-ante.

On the basis of this research, it is safe to say the future of business model research will adjust from an IS dominated area to a more strategy oriented subject. The approach exposed in this dissertation fills an important gap in the business model literature, and provides insights and advancements that will help the management community better understand the complexity of businesses in general. From a managerial point of view, organizations should benefit from having a clearer understanding of what constitutes their business models, how their choices of business models can dramatically affect their performance and how it correlates with their strategy and development of dynamic capabilities.

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# APPENDIX

## LIST OF APPENDIX

## Appendix A. An extensive summary of the basic findings in Slovenian Language

## DALJŠI POVZETEK DISERTACIJE V SLOVENSKEM JEZIKU

### UVOD

Disertacija raziskuje področje poslovnih modelov, pri čemer se osredotoča na specifično podrocje, ki do sedaj še ni bilo dobro raziskano: namreč razumevanja izvora, konceptualizacije in uporabe poslovnih modelov. Večina predhodnih raziskav na področju poslovnih modelov je bila ne-konceptualna, široka in včasih celo ohlapna, zato to delo poskuša prispevati k več jasnosti na tem področju.

Glavno raziskovalno vprašanje te disertacije je:

Kaj so poslovni modeli, kam jih umestiti v literaturi in kako jih je mogoče definirati in uporabljati, da bi ustvarili trdne temelje za nadaljnje raziskovanje in pomagali poslovnežem bolje razumeti vlogo in pomen poslovnih modelov v svojih organizacijah.

Cilj te disertacije je obravnava terminologije poslovnega modela, da bi zgradili temelje za nadaljnje raziskave na to temo in omogočili razvoj orodij za implementacijo le-teh v praksi.
Ta konceptualni okvir želi prispevati k boljšemu razumevanje odnosa med strategijo, dinamičnimi zmogljivostmi in poslovnimi modeli.

Raziskovalne cilje te disertacije je mogoče povzeti kot (1) konceptualni okvir, ki bolje pozicionira izraz poslovni model v literaturo na področju poslovne informatike in managementa ter pomaga menedžerjem predstaviti poslovno logiko podjetja na strukturiran način (2) opis, kako različni poslovni modeli v isti panogi dajejo različne rezultate in (3) orodje, ki pomaga oblikovanju poslovnega modela ali spreminjanje skozi koncept ponudbe vrednosti (angl. value proposition).

Iz te raziskave so nastali trije znanstveni članki, ki so objavljeni ali sprejeti v objavo v uglednih znanstvenih revijah.

### POGLAVJE 1: POSLOVNI MODEL: KAJ JE IN KAJ NI

V zadnjih dveh desetletjih je bil izraz "poslovni model", pogosto napačno uporabljen, tako s strani raziskovalcev kot tudi poslovnežev. Izraz se pogosto uporablja med managerji, svetovalci ali strokovnjaki iz različnih področij in tudi v medijih.

Pomen in uporaba izraza kaže na pomembnost poslovnega modela, vendar ni soglasja glede njegovega pomena. Včasih se zdi, da je glavni cilj pomagati svetovalcem prodajati svoje storitve in raziskovalcem objavljati študije primerov neuspešnih podjetij v elektronskem poslovanju zaradi "neprimernih poslovnih modelov". Izraz poslovni model pogosto zajema vse, med drugim, strategijo, poslovni model in prihodkovni model.

Čeprav so nekateri članki kritično preučili določene vidike poslovnih modelov (Casadesus-Masanell & Ricart, 2010; Morris, Schindehutte, in Allen, 2005, Zott in Amit, 2008; Zott, Amit, In Massa, 2011), si stroka še ni enotna glede vloge poslovnega modela v teoriji in praksi.
Nadaljne raziskave so potrebne zaradi različnih vidikov. Prvič, razlogi, zakaj je poslovni model pridobil na pomembnosti v zvezi z internetnimi podjetji niso jasni: dodatno povezano vprasanje je pomen poslovnega modela v zvezi s klasičnimi podjetji (angl. brick-and-mortar companies). Drugič, razmerje med poslovnim modelom in drugimi podobnimi izrazi (npr. strategija, ekonomski model, prihodkovni model) ostaja nejasno. Jasno razlikovanje med izrazom poslovni model in drugimi izrazi je potrebno, da se prikaže, ali je izraz preprosto modna muha ali ima pomembno mesto v poslovni literaturi in praksi. Tretjič, povezava pojma poslovnega modela z najpogostejšimi teorijami na področju poslovne informatike in managementa; denimo teorija organizacije na temelju virov (angl. resource based view) je tudi nejasna. Zato je veljavnost izraza in njegova vloga v literaturi le delno pojasnjena.

Sčasoma je izraz poslovnega modela trpel predvsem na dva načina: prvič, je izraz postajal vedno bolj nejasen zaradi težnje po nadomestitvi drugih poslovnih izrazov, kot so denimo strategija in, drugič, več podjetij je v 90. letih slabo poslovalo in na koncu bankrotiralo kot posledica zlorabe izraza, in trditev, da uporabljajo »inovativne poslovne model2«. Čas je, da se znova naučimo, kaj izraz poslovni model obsega in dokazati njegov pomen in koristnost tako za akademsko kot tudi poslovno skupnost.

Naša študija torej obravnava terminologijo poslovnega modeal skozi tri glavne vidike. Prvič se osredotočamo na zgodovinski razvoj izraza, od njegovega nastanka, razvoja in pretirane uporabe, ki je izkrivila njegov pomen. Spoznali smo, da je bil izraz poslovni model prvič omenjen v znanstvenem članku že v letui 1957 (Bellman et al., 1957), ki je opisoval uporabo poslovnih iger za izobraževalne namene. Od takrat do leta 1990 je število objav v znanstvenih revijah bilo majhno. V celotnem desetletju je samo pet clankov vsebovalo besedo "poslovni model" v svojem naslovu (Osterwalder, Pigneur in Tucci (2005)). Z razvojem informacijskih in komunikacijskih tehnologij (ICT) in s pojavom internetnih podjetij, je izraz hitro pritegnil več pozornosti. V članku prikažemo, kako jeporaba pojma poslovni model sledila trendu NASDAQ indeksa od zacetka 90. let do razpoka internetnega mehurčka. Na kratko, široka uporaba terminologije poslovnega modela je povezana s podjetji tehnološke narave. Zdi se, da

so poslovni modeli odgovor za razlago, kako inovativna podjetja, ki se ukvarjajo s tehnologijo ali kakrsnokoli drugo obliko nejasnih, vendar potencialno donosnih konceptov, tujih logiki tradicionalnega poslovanja, pridobivajo poslovno vrednost.

Drugič, predlagamo teoretično podlago za poslovni model na osnovi teorije organizacije na temelju virovin "teorije transakcijskih stroškovTeorija organizacije na temelju virov namreč sama ne more pojasniti kompleksnosti poslovnih modelov ter njihove naraščujoče pomembnosti v zadnjih letih. Viri sam po sebi ne prinašajo nobene vrednosti za stranke, vrednost nastane zaradi transakcije z uporabo teh virov. Na primer, tehnologija (vir) ima samo malo oz. nič vrednosti (Chesbrough, 2007). S pomočjo tehnologije podjetja ustvarjajo te transakcije, da kreirajo vrednost. Zato se strinjamo z McIvorjem (2009), ki poudarja pomen združevanja teorije organizacije na temelju virov in teorije transakcijskih stroškov. Ker je poslovna vrednost ustvarjena iz edinstvene kombinacije virov, teorija transakcijskih stroškov opredeljuje transakcijsko učinkovitost kot vir vrednosti (Morris et al., 2005). V skladu s temi ugotovitvami trdimo, da poslovni modeli predstavljajo posebno kombinacijo virov, ki s transakcijami ustvarjajo vrednost tako za stranke kot podjetja. Logika našega izbora teh dveh teorij sledi Schumpeter-jevi (1934) teoriji gospodarskega razvoja, ki med drugim dokazuje, da je vrednost ustvarjena iz kombinacije virov, medtem ko teorija transakcijskih stroškov priznava učinkovitost transakcij in mejnih odločitev kot vir vrednosti (Morris et al., 2005). Podobno je prejšnja raziskava pokazala, da se teoretični temelji za RBV in TCE pogosto uporabljajo med poslovneži pri ustvarjanju poslovnega modela (Amit & Zott, 2001, George & Bock, 2011).

Tretjič, predlagamo sistematično razlago, kaj poslovni model je in predvsem kaj ni. Predstavimo pogoje, pod katerimi je poslovni model privlačen in smiseln koncept. Z jasnim razlikovanjem terminologije poslovnega modela od drugih priljubljenih izrazov (strategija, poslovni koncept, prihodkovni model, ekonomski model in model poslovnih procesov), smo prisli do zanimivih zaključkov.

**Strategija**

Z nadgradnjo predhodnjega članka (Casadesus-Masanell, Ricart 2010), ki je trdil da so "poslovni modeli odsev realizacije strategije" (str. 204), ugotavljamo, da strategija oblikuje razvoj zmogljivosti, da se v prihodnje spremeni sedanje poslovne modele. Strategija je ustvarjanje dinamične zmogljivosti, katerih cilj je učinkovito odgovoriti na prihodnje in sedanje nepredvidljivosti (Ambrosini in Bowman, 2009). Dinamične zmogljivosti so opredeljene kot sposobnost za predvidevanje, oblikovanje, izkoriščanje priložnosti ob ohranjanju konkurenčnosti z izboljševanjem, kombiniranjem, zaščito in, v kolikor je potrebno preurejanjem, otipljivih in neotipljivih sredstev podjetja " (Teece, 2009). Slika 1.2" je rezultat

naše argumentacije, da strategija (dolgoročna perspektiva) vzpostavlja dinamične zmogljivosti (srednjeročna perspektiva), ki pa omejujejo možne poslovne modele (kratkoročni vidik) za soočenja z prihajajočimi ali obstoječimi nepredvidljivostmi. Slika 1.3. nadalje poudarja naše trditve z navedbo, da strategija odraža, kaj podjetje želi postati, medtem ko poslovni modeli opisujejo, kaj podjetje dejansko je v danem trenutku.

**Poslovni koncept**

Trdimo, da je vsak poslovni koncept konceptualizacija neke realnosti poslovanja, kot je podjetje strategija družbe ali poslovni model. To je v skladu z Applegate in School (2001), ki definirata poslovni koncept kot: 1) poslovna priložnost na trgu, 2) proizvodi in storitve; 3) tržna dinamika; 4) strategija za doseganje prevladujočega položaja ter 5) strateška opcija za razvoj podjetjaTrdimo, da bo izraz poslovni koncept postopoma izginil iz znanstvene literature in naredil prostor za bolj rigorozno alternativo – izraz poslovni model.

**Prihodkovni Model**

Izraz poslovni model se pogosto zamenjuje z prihodkovnim modelom (George & Bock, 2011). Prihodkovni model je pomemben element poslovnega modela, definiran kot način, s katerim potjetje zajame vrednost (Zott in Amit, 2006). Zato prihodkovni model sam po sebi ne določa, kako podjetje ustvarja vrednost v celoti, ampak le, kako podjetje s prodajo svojih proizvodov ali storitev ustvari prihodke. Na kratko, prihodkovni model sam po sebi ne opredeli poslovnega modela podjetja, čeprav je seveda pomemben sestavni del poslovnega modela.

**Model poslovnih procesov**

Nenazadnje, modeliranje poslovnih procesov je pristop za opisovanje kako podjetja izvajajo svoje aktivnosti in običajno vključuje grafične prikaze dejavnosti, dogodkov in nadzora poslovanja (Recker et al., 2009). Modeliranje procesov tako omogoča bolj strukturirano identifikacijo sredstev, s katerimi se transakcije izvajajo v okviru obstoječega poslovnega modela. Slika 1.4. prikazuje poenostavljen model poslovnega procesa letalske družbe.

Če povzamemo: ta del naše raziskave je ugotovil, da bi bilo bolj primerno kot kritikesamega izraza »poslovni model kritizirati način njegove uporabe. Namesto opisovanja poslovnega modela kot neustreznega managerskega koncepta, je bolje, da se ga opiše kot "necelosten pristop". Poslovni model osredotoča pozornost odločevalca na tiste odločitve, ki imajo kratkoročne posledice. Vendar pa poslovni model ne zapoveduje odločevalcu naj ignorira strategijo podjetja, ko se odloča, kako naj podjetje reagira na na prihajajoče nepredvidljivosti.

Da bi prekašal konkurenco na dolgi rok, mora odločevalec upoštevati tri pomembne korake. Prvič, treba je ne samo izbrati pravo kombinacijo virov (v skladu s teorija organizacije na temelju virov) , ampak tudi najbolj učinkovite transakcije (v skladu s teorijo transakcijskih stroškov ) ob pravem času. Drugič, potrebno je stalno obnavljati svojo konkurenčno prednost, saj jo konkurenca ogroža s konstantnim razvojem. Tretjič, potrebno je hitro in učinkovito spreminjati poslovni model, v skladu s strategijo in novimi nepredvidljivostmi v okolju. Torej, poslovni model sam po sebi odločevalcem ne nudi vseh odgovore, kako podjetja ustvarjajo trajnostno konkurenčno prednost. Namesto tega riše sliko podjetja in razkriva, kako različni elementi poslovanja sodelujejo v določenem trenutku.

## POGLAVJE 2: Prelomne tehnologije: PERSPEKTIVA POSLOVNEGA MODELA ZA RAČUNALNIŠTVO V OBLAKU

V tem poglavju bomo preučili, kako so se Amazon.com, Salesforce.com in Siebel odzvali na prelomno tehnologijo (angl. disruptive technology) računalništva v oblaku s pomocjo različnih poslovnih modelov. Da bi raziskali, kako je računalništvo v oblaku zmotilo uveljavljena podjetja in kako so različni poslovni modeli, ki temeljijo na isti tehnologiji, dali različne rezultate, moramo ustrezno opredeliti komponente poslovnega modela. Nenonen in Storbacka (2010) opredelita poslovni model kot skupek petih elementov: (1) ponudba vrednosti (2) prihodkovna logika, (3) omrežje vrednosti; (4) sredstva in zmogljivosti ter (5) strateške odločitve (glej sliko 2.2).

Računalništvo v oblaku omogoča računalniške in komunikacijske zmogljivosti preko interneta. Omogoča obdelavo in shranjevanje informacij, dostop do informacij od kjerkoli in kadarkoli. Zato predstavlja preboj, kako ljudje in podjetja delujejo in komunicirajo preko interneta.

Organizacije ga uporabljajo , da bi povečale procesne zmogljivosti in možnosti shranjevanja podatkov brez naložb v novo infrastrukturo (npr. strežniki), osebje (programerji) ali velikih fiksnih stroškov, saj računalništvo v oblaku ponuja plačilo po dejanski uporabi (angl. pay-as-you-use-model) Oblak ponuja nadgradljivo informacijsko-tehnološko infrastrukturo, ki omogoča podjetjem, da hitro gradijo nadgradljivo poslovanje z nizkimi začetnimi stroški (Hugos & Hulitzky, 2010). Računalništvo v oblaku se lahko pojavlja v različnih oblikah, vključno z: infrastruktura kot storitev (IaaS), platforma kot storitev (PaaS) in programska oprema kot storitev (SaaS) (glej npr. Hwang in Li (2010)). Čeprav nekateri (npr. Armbrust et al. (2010)) trdijo, da ni ostrega razlikovanja med SaaS in IaaS, verjamemo, da obstajajo pomembne razlike v poslovnih pristopih podjetij, ki poslujejo z SaaS in IaaS (glej Slika 2.1).
V naši analizi smo najprej preučili Siebel Systems, podjetje, ki je začelo ponujati programsko opremo za avtomatizacijo prodaje in kmalu postalo znano po svojih rešitvah za management

odnosov s strankami (angl. customer relationship management (CRM)". Siebel je bilo tradicionalno programsko podjetje, kateremu so uporabniki storitev plačevali: (1) licence, (2) podporne storitve in (3) nadgradnje. Zaradi visokih stroškov so morali zagotoviti lastne računalniške vire, licence, usposabljanje uporabnikov in delovanje sistema storitev (Boulton, 2012). Vendar so prednosti rešitev na temelju računalništva v oblakuustvarili dvom med direktorji informatike, ali naj obnovijo drage programske pakete od Siebla ali preizkusijo trendovske rešitve v oblaku. Rešitve v oblaku kot so Salesforce.com ali Amazon Web Services, so se uveljavili kot moderna alternativa Siebel-u s funkcijami, kot so vključevanje socialnih omrežij, boljši uporabniški vmesnik in dejstva, da podjetje ne potrebuje lastne strežniške infrastrukture. Sieblov pretekli uspeh in povezani poslovni model je pripeljal podjetje na rob propada, ko je tehnologija spremenila pravila igre.

Salesforce.com je spletna rešitev »po potrebi«, ki omogoča strankam, da najamejo programsko opremo. Storitev se najame in plačuje mesečno (glej (Weinhardt, Anandasivam, Blau in Stosser (2009) za več podrobnosti o cenovnih modelih za podjetja v oblaku) in je najhitreje rastoč CRM ponudnik v Združenih državah Amerike (Wardley & Shirer, 2012). Tabela 2.1 prikazuje temeljne razlike med Siebel in Salesforce.com.

Zgodba o Amazononu je drugacna, saj je njegova rešitev v oblaku v osnovi zrasla iz njegovih lastnih potreb. Njegova internetna spletna trgovina zahteva sofisticirano računalniškp infrastrukturo, saj mora poleg zanesljivosti delovanja pokriti tudi velika sezonska nihanja uporabe spletne trgovine (zlasti v času božiča). Kot posledica tega dejstva je Amazon že na začetku potreboval zelo prefinjen, učinkovit in, kar je najpomembneje, prilagodljiv računalniški sistem (Siegel & Gibbons, 2008). Leta 2002 se je Amazon odločil, da da v najem del svoje računalniške platforme za razvijalce. To je bil začetek Amazon Web Services (AWS), dejavnosti, ki je bila bistveno drugačna od njihove predhodne ponudbe. Rezultati so motivirali Amazon, da je AWS ponudil tudi drugim podjetjem, ki lahko na ta nač optimizirajo svoje računalniške kapacitetein zmanjšajopresežne zmogljivosti ter investicije v strojno opremo. Tabela 2.2 ponuja povzetek razlik med poslovnimi modeli dveh podjetij, ki nudita računalništvo v oblaku (Amazon in Salesforce.com).

Glavne ugotovitve teh analiz primerov so povzete v naslednjih točkah:

• Tehnologija sama po sebi ne zmoti obstoječih podjetij; težava je njihova nesposobnost prilagoditve ali ustvaritve novih poslovnih modelov. Vodstvo mora biti pripravljeno eksperimentirati in graditi dodatne poslovne modele, ki se potencialno lahko odzovejo na nastajajoče tehnološke spremembe.

• Vodstvo mora nenehno spremljati manjša podjetja in trende panoge. Če moteča tehnologija ogroža njihovo poslovanje, bi morale večje organizacije z manj prožnosti razmišljati o nakupu ali vzpostavitvah trdnih partnerskih zvez s podjetji, ki že uporabljajo takšno novo tehnologijo.

• Vodstvo mora biti pripravljeno, da korenito spremeni svoje obstoječe strategije in gradi na poslovnih modelih, ki so se sposobni prilagoditi tehnološkim spremembam.

• Ker inovativna tehnologija na splošno zmanjšuje in na koncu odpravi mejne stroške (glej Anderson (2009)), mora vodstvo podjetja razmisliti in ustrezno vključiti prihodkovne modele, programe, ki so v osnovni verziji brezplačni, za dodatne funkcionalnosti pa je treba doplačat (angl. freemium revenue models), da bi privabili nove uporabnike in jih kasneje s prodajo dodatnih storitev spremenili v plačljive stranke.

• Ker inovativna tehnologija po navadi zmanjšuje transakcijske stroške in stroške menjave ponudnika (angl. switching costs), morajo podjetja razviti inovativne načine, da zadrži stranke na načine, ki niso samo finančne narave.

• Podjetje, ki prodaja inovativne rešitve, ki temeljijo na prelomni tehnologiji, ne sme podcenjevati prizadevanj, povezanih z gradnjo blagovne znamke, pomembni pa so tudi izobraževanje, pridobivanje in ohranjanje strank.

• Podjetja, ki kasneje vstopajo na tržišče, da bi zaslužile s s pomočjo novih tehnologij, morajo natančno opredeliti, kje je njihova priložnost, kaj je njihova originalnost in kje priložnosti ni vec.

Na splošno, naša analiza študije primera ponuja boljše razumevanje ne samo tega, kako tehnološki napredek vpliva na uspeh podjetja, ampak, najpomembnejše, kako različni pristopi k razvoju poslovnih modelov pripeljejo do različnih načinov uporabe tehnologije. Prvi novih prelomnih tehnologijah se morajo vodstva podjetij zavedati, da zgolj vključevanje novih tehnologij v svoj obstoječi poslovni model morda ne bo dovolj.

Nova tehnologija lahko zahteva popolnoma nov strateški pristop, ki se lahko na prvi pogled zdi sporen zaradi obstoječe prakse v podjetju, vendar je potreben, da bi zagotovil njegovo dolgoročno blaginjo.

**POGLAVJE 3: Ponudba vrednosti kot spodbujevalec inovacij, usmerjenih v stranko**

S pomočjo študije primera, ta del doktorske disertacije prispeva k boljšemu razumevanju koncepta ponudbe vrednosti, , ki je ključni element vsakega poslovnega modela. Čeprav se ponudba vrednosti osredotoča na stranko, pa mora podjetje za svojolastno uporabo natančno

opredeliti, kaj namerava organizacija zagotovljati stranki(Lanning, 2000). Ponudba vrednosti, zato opredeli način delovanja podjetja, saj fokusira njegove aktivnosti na to, kako najbolje služiti svojim strankam ter ob tem ustvarjati dobiček (Barnes et al., 2009). Opiše problem stranke, rešitev za problem in vrednost z vidika stranke (Chesbrough & Rosenbloom, 2002). Zanimivo je, da raziskava v Anderson et al. (2006, str. 2), trdi da je "izjemno težko najti primere ponudbe vrednosti, ki so zanimivi za stranke ". Dejstvo je, da imajo kupci veliko možnosti in podjetja morajo razlikovati lastno ponudbo od alternativne, kar azhteva skrbno preučitev konkurence in kaj njihove ciljne stranke resnično cenijo. Ponudba vrednosti mora zagotavljati ciljo usmerjene, pomembne koristi, ki pomagajo rešiti tezave ciljnih kupcev s tem, da so drugačne (npr. boljše od svojih konkurentov), merljive (tj. osnovane na merljivih, konkretnih rezultatih) in dolgoročne (veljajo za daljše časovno obdobje) (Anderson et al., 2006).

Zato ponudba vrednosti ne opisuje aktivnosti in ponudbe podjetja, temveč izkušnje strank v smislu njihovih potreb in želja (Barnes et al., 2009). Podjetja tekmujejo med seboj z ustvarjanjem dodatne vrednosti za svoje stranke s povečevanjem koristi in zmanjševanjem cen. Naša študija primera pa natančnejedefinicijo ponude vrednosti (Barnes et al. 2009), tako da jo razgradi v pet komponent. Vsak od teh komponent vključuje koristi in stroške, kot jih dojemajo različne stranke Amazona, denimo končni potrošniki, najemniki infrastrukture in razvijalci. Koncepti in orodje so narejeni na predpostavki, da kupci sprejmejo končno odločitev v odločitvenem procesu, zato je ponudbo vrednosti treba analizirati z vidika kupca.
Ta del raziskave temelji na že opravljeni študiji podjetja Amazon.com. Za enoto analize smo izbrali posamezno novost, ki jo je lansiralo podjetje. Viri podatkov so povzeti v tabeli 3.1. Cilj raziskaveni bil ponuditi statistično, temvec analitično generalizacijo, na podlagi katere bi razširili in posplošili teorije (Bickman & Rog, 1998; Gummesson, 1997; Scapens, 1990, Yin, 2003).

Naše ugotovitve kažejo, da vse posamezne novosti ustvarijo dodano ali pa zmanjšajo vrednost s pomočjo vsaj ene od petih komponent, povzetih v tabeli 3.3: učinek (angl. performance; P ); enostavnost uporabe (angl. ease of use; E), zanesljivost (angl. reliability; R)), fleksibilnost (angl. flexibility; F), in emocionalna privrženost (angl. affectivity; A). Vsi elementi (PERFA) temeljijo na teoretičnih opredelitvah, ki ustrezajo našim ugotovitvam.

S prispevanjem k boljšemu razumevanju koncepta ponudbe vrednosti in njenegovi povezavi z inovacijami, smo dobili model, ki lahko pomaga tako raziskovalcem kot poslovnežem bolje razumeti strukturo strukturo vrednosti in njeno vlogo v inovacijskem procesu. Stranke so tiste, ki se odločijo za nakup določenega izdelka; zato morajo novosti temeljiti na tem, kaj stranke resnično cenijo. Ker so menedžerji tisti, ki sprejemajo glavne odlocitve, naš PERFA model nudi smernice o tem, na katere vidike naj se na svojih izdelkih osredotočijo, da s tem ustvarijo

dodatno vrednost njihovim strankam. Pristop, ki je osredotočen na dodatno vrednost z uporabo PERFA modela zahteva od menedžerjev, da ponovno presodijo svoj pogled na inovacije, s tem da se sami postavijo v položaj kupca. Pri tem menedžerji lahko opredelijo ključne dejavnike med petimi perspektivami PERFA in tako sprejmejo boljše odločitve, ko je potrebno povečati ponudbi vrednosti za njihove stranke.

Tako menedžerji kot poslovneži lahko koristno uporabijo naše ugotovitve. Z uporabo PERFA modela, lahko bolje razumejo, kaj vpliva na njihove novosti in kako bo to vplivalo na strankino ponudbo vrednosti. Naše delo tako dopolnjuje obstoječa orodja, kot so strateško platno (angl. strategy canvas) ali okvir štirih aktivnosti (angl. Four Actions Framework), ki sta ga Kim in Mauborgne (2005) razvila v njuni knjigi Strategija modrega oceana. Avtorja ponudita nadaljnji vpogled v to, kako inovacije in ustvarjanje modrega oceana lahko prinese povečano, kupcu namenjeno ponudbo vrednosti. Okvir PERFA se lahko uporablja tudi za ocenjevanje vpliva novosti konkurence na trgu. Z identificiranjem, na katerega od petih elementov PERFA ima novost največji vpliv (tako pozitivni in negativni), menedzerji lahko natančneje oblikujejo strateški odziv na konkurenčne inovacije. Nenazadnje bo to omogočilo menedžerjem razumeti, kateri dejavniki odražajo konkurenco v panogi in določiti trenutne trende na področju inovacij.

## SKLEPNE OPOMBE

Ta disertacija je poskusila prispevati k boljšemu razumevanju zgodovinskega in teoretičnega razvoja terminologije poslovnega modela v okvirju poslovne literature, njene uporabe v praksi in razumevanje njene temeljne osnove, ponudbe vrednosti.. Kot Van de Ven (1989) povzema delo Lewina (1945): »Dobra teorija je praktična ravno zato, ker prispevka k napredku znanja v nei znanstveni disciplini, usmerja raziskave k reševanju ključnih vprašanj in bolje osvetljuje poklic managerjev(str. 486).

V poglavju 1 smo prispevali k pojasnitvi pomena izraza poslovni model v sklopu poslovne literature in zagotovili trdno podlago za prihodnje empirične raziskave. Z zgodovinsko analizo razvoja poslovnega modela in s primerjavo njegovega pomena z drugimi popularnimi menedzerskimi izrazi, smo uspeli pojasniti pomen in uporabo tega izraza. Na teoretični ravni smo izpeljali pomen poslovnih modelov s pomočjo teorije organizacije na temelju virov in teorije transakcijskih stroškov. Poleg tega smo zagotovili okvir, ki pozicionira izraz poslovni model napram dvema zelo pomembnima menedžerskima konceptoma: »strategija« in »dinamične sposobnosti« . Narava okvirja ne le prispeva k znanju na tem področju, ampak tudi odpira številne možnosti za nadaljnje raziskave. Na vodstvenih ravni zagotavlja

poslovnežem jasno sliko o tem, kako sestaviti poslovni model v njihovem podjetju. Ko se sprejemajo strateške odločitve bo verižna reakcija vplivala na razvoj dinamičnih zmogljivosti podjetja in posledično poslovnih modelov. Dodatno bodo tudi dogodki v okolju, kjer deluje podjetje, ustvarili učinke, ki bodo vplivali na razvoj dinamičnih zmogljivosti in posledično na oblikovanje strategij.

Ta študija odpira številne možnosti za nadaljnje raziskave. Opredelili smo jasen odnos in okvir za povezavo strategije, dinamičnih sposobnosti in poslovnih modelov; verjamemo da se bo ta okvir še naprej razvijal in postala podlaga za raziskovalno delo na tem področju. Na primer, delo Pavlouva in El Sawya (2011), ki sta raziskovala vlogo in pomen dinamične zmogljivosti lahko dopolnjuje naše delo. Onadva analizirata »črno škatlo« (angl. "black box") dinamičnih zmogljivosti, zato bi lahko nadaljnje raziskave pokazale, kako njun okvir sovpada z našimi perspektivami. Lahko bi trdili, da so operativne zmogljivosti izražene skozi poslovni model podjetja kot rezultat njegovih dinamičnih zmogljivosti. Podobno vplivno delo Barreta (2010) na temo dinamičnih zmogljivosti postavlja pod vprašaj domnevo, da večke dinamične zmogljivosti vodijo do večje učinkovitosti. Avtor navaja notranje in zunanje dejavnike, ki omejujejo morebitno uporabo dinamičnih zmogljivosti. Prepričani smo, da se odgovor na omejitve, ki jih raziskuje Barreto nanaša na materializacijo skozi poslovni model, ki ga uporablja podjetje. Te in druge povezave lahko predstavljajo osnovo za nadaljnje raziskave na področju dinamične zmogljivosti in poslovnih modelov.

Ker smo jasno ločili koncept poslovni model od ostalih podobnih izrazov iz poslovne literature, pričakujemo, da so pretekla nerazumevanja razjasnjena. Tako smo zagotoviti jasno izhodišče za prihodnje raziskave.

Razumevanje terminologije poslovnega modela in njene uporabe v praksi so bile nato razširjene v 2. poglavju. Tukaj smo raziskali vpliv različnih poslovnih modelov na primeru tehnoloških podjetij. Ko se je pojavilo računalništvo v oblaku, se je odprl nov sklop možnosti (in tudi nevarnosti), zato so poslovni modeli potrebovali posodobitve oz. spremembe. Raziskovali smo, kako nejasnost strategije vodi pomembna podjetja k izgubi svoje vodstvene pozicije zaradi neustrezne uporabe poslovnih modelov, saj niso sposobna slediti spremembi strankine ponudbe vrednosti. Nadalje smo poudarili pomen prilagajanja obstoječih poslovnih modelov podjetij zaradi pojava tehnoloških sprememb ne glede na trenutno uspešnost podjetja. Prav tako smo na primeru Amazon.com prikazali, kako trenutno neizkoriščene dinamične zmogljivosti lahko postanejo vir konkurenčne prednosti, če so uporabljene s pomočjo pravilnih poslovnih modelov. Poudarili smo pomen, kako doseči trenutne neuporabnike, pomen trženja za uspeh novih poslovnih modelov in kako dobra in zgodnja postavitev zaklepalnih (angl. "lock-in") mehanizmov lahko pripelje do tega, da nove stranke spoznajo in nato tudi uporabljajo storitve ali izdelke.

Na podlagi dela Christensena (1997), te analize študije primerov predstavljajo korak v smeri razumevanja povezave med inovacijami, prelomno tehnologijo in poslovnimi modeli v upanju, da bodo odprle pot za nadaljnji teoretični razvoj.