Instituto Superior de Economia e Gestão
UNIVERSIDADE TÉCNICA DE LISBOA
DESDE 1911

# MASTER

MANAGEMENT AND INDUSTRIAL STRATEGY

# MASTER´S FINAL WORK

DISSERTATION

BRUNO ALEXANDRE PIMENTA BALEIA

*BUSINESS MODEL TYPOLOGIES: REVIEW AND CRITICAL ANALYSIS*

**EXAMINING COMMITTEE:**

PRESIDENT: PH.D. JOSÉ MIGUEL ARAGÃO CELESTINO SOARES

MEMBERS: PH.D. MANUEL DUARTE MENDES MONTEIRO LARANJA

PH.D. PEDRO DOMINGUINHOS

SEPTEMBER 2012

Instituto Superior de Economia e Gestão
UNIVERSIDADE TÉCNICA DE LISBOA
DESDE 1911

# MASTER
MANAGEMENT AND INDUSTRIAL STRATEGY

# MASTER´S FINAL WORK
DISSERTATION

BRUNO ALEXANDRE PIMENTA BALEIA

*BUSINESS MODEL TYPOLOGIES: REVIEW AND CRITICAL ANALYSIS*

**SUPERVISION:**
PH.D. MANUEL DUARTE MENDES MONTEIRO LARANJA

SEPTEMBER 2012

# Index

## Acknowledgments

I am grateful to my advisor, Professor Manuel Laranja, for his help and interesting explanations. In particular, I would like to thank him for the numerous suggestions and for mentioning to me many points of view and problems connected to this topic.

I would also like to thank Patrícia Silva and Magda Correia for drawing to my attention many helpful references and for the many inspiring discussions. I wish to express my gratitude to Professor Pedro Cunha for introducing me to the field of Business Models and for his suggestions in the early stage of this work.

Finally, I thank my family and friends, for the endless patience and support.

## Abstract

This dissertation provides a critical analysis of the main typologies on business models found in the literature. In order to achieve such analysis, we conducted a literature review that works in two ways: offer the reader a background about business models and, at the same time, to guide the analysis of typologies. Three main streams of literature (named in this work as the Business Model Triad) were identified in literature review: E-business; Strategy; and Innovation. In each area were identified different typologies used by scholars. Then, it was clarified what could be their contributions and weaknesses, and finally it was suggested a possible path for future research. In conclusion, we found that is hard to construct a unique typology with the current literature, because there seems to be little cross-fertilisation amongst all three streams.



**Keywords:** Business Models; Typologies; E-business; Strategy; Innovation

## 1. Introduction

Today's economy is characterized by global competition between firms. The improvements achieved over the last decades concerning Information and Communication Technologies (ICT) hastened the globalisation process. Consequently, we have been witnessing to several changes in the way firms and stakeholders relate to each other and how this affects business performance. For example: Customers are more demanding about what they buy; supplier alternatives are more transparent; Government States are paying more attention to regulation; Society demands more accountability to economical agents.

More than ever, firms strive to compete in such a ferocious environment, looking for new ways to succeed. With this purpose, perhaps firms should look at their business model and consider how it can be used to compete with their rivals. The business model concept allows firms to rethink their internal processes and their offering propositions to their customers. In the current macroeconomic environment, strategy thinking at top level becomes essential and the concepts and the methodologies associated with conception and implementation of a business model may provide a structure of reasoning that help managers to understand the organisation and to identify what changes need to be operated to turn the company more competitive.

Scholars have interpreted the notion of business model especially through the construction of typologies, which usually result in *taxonomies* or in a *conceptual model* of the way firms perform business. Taxonomies enumerate a *finite* number of business model types, while a conceptualisation of business model describes a *meta-model* or a *reference model* for a specific industry, describing an *infinite* number of business models[1]. Therefore, throughout this dissertation I intend to begin by understanding what a business model is and to figure out what are the main thematic areas where it is studied. Then, I will introduce the main typologies proposed in the literature to generate business models and then critically analyse them in order to realize how suitable they can be both for scientific research and as a managerial instrument.

[1] Gordijn, J., Osterwalder, A., Pigneur, Y., 2005, "Comparing two Business Model Ontologies for Designing e-Business Models and Value Constellations", *18th Bled eConference – eIntegration in Action,* Bled, Slovenia.

## 2. Goals and Methodology

Choosing a research theme takes the investigator to formulate a specific problem that can be researched by scientific processes. Thus, the first step is to clearly explain the problem. The theme addressed in this work – Business Models – has been discussed in the last years by many authors, where they present their own conceptions about what a business model should be. We also face a growing number of case studies on business models of companies or sectors, where each case presents a different typology to generate a business model. While this diversity is specific in different business fields, it hampers the spread of a more general typology widely accepted in the academic world. Thereby, with the aim of obtaining a better understanding of what could be a “role-model” typology, this work intends to:

- **Find and critically analyse the literature typologies that help to construct a business model;**
- **Analyse possible methodologies that allow managers to build a common guiding thread in the pursuit of a new business model.**

In order to perform such work, I performed a research with the words *Business Models* as the subject topic at the EBSCO Business Source Complete database. As a result, I obtained more than 1,200 articles. For a more refined result, I decided to adopt a set of criteria to restrict the research scope. First, as Ghaziani and Ventresca (2005) and Zott, Amit and Massa (2010) found out, there has been an impressive increase of articles about this theme since the mid 90’s. So, I restrict the initial research for a period of time ranging between 1995 and 2012. Secondly, I consulted the ISI Web of Knowledge to verify the quality of the articles. After that, and while doing my research, I found references to other articles and books on business models that could improve this document, so I decided to also include them as study material. Finally, after applying these criteria, I was able to reduce the number of works to 54. **Table 1** gives a brief overview of the literature used for this work, where the subject *Other Journals and Papers* refers to one-only publication about business models on a specific journal or working paper.

**Table 1: References Summary**

| Publication | Author(s) (Year) |
|---|---|
| **Harvard Business Review** | Johnson *et al*. (2008); Johnson & Suskewicz (2009); Magretta (2002). |
| **Long Range Planning** | Baden-Fuller & Morgan (2010); Casadesus-Masanell & Ricart (2010); Chesbrough (2010); Demil & Lecoq (2010); McGrath (2010); Teece (2010); Zott & Amit (2010). |
| **MIT Sloan Management** | Boudreau & Lakhani (2009); Chesbrough (2007). |
| **Strategic Management Journal** | Amit & Zott (2001); Teece (2007); Zott & Amit (2008). |
| **Strategy and Leadership** | Chesbrough (2007); Giesen *et al*. (2007). |
| **Other Journals and Papers** | Applegate (2001); Björkdahl (2009) Chesbrough & Rosenbloom (2002); Dubosson-Torbay *et al*. (2002); Eriksson *et al*. (2008); Ghaziani & Vestresca (2005); Hedman & Kalling (2003); Mahadevan (2000); Morris *et al*. (2005); Rappa (2001); Richardson (2008); Seddon *et al*. (2004); Shafer *et al*. (2005); Timmers (1998); Zott, Amit & Massa (2010). |
| **Books** | Afuah (2004); Chesbrough (2003); Hamel (2000); Osterwalder & Pigneur (2010); Tapscott *et al*. (2000); Weill & Vitale (2001). |

## 3. Literature Review

The business model concept is inseparable from economic activities, even if the conceptual approach to this issue is recent. Actually, the considerable increase in references to this concept from the mid-90s onwards is, according to Zott, Amit & Massa (2010), a result of the development of the Internet and the emergence of the so-called e-businesses. However, quoting other authors, these authors suggest there are also other more reasons for the emergence of the concept of business model, including the rapid growth of emerging markets (Prahalad & Hart, 2002) and the expansion of industries and organizations dependent on post-industrial technologies (Perkman & Spicer, 2010).

The literature shows that scholars are far from a unanimous view about defining what a business model is. In fact, there are many scholars providing different definitions over time. **Table 2** summarises some of the definitions for business model.

**Table 2: Business Model Definitions**

| Author(s) (year) | Definition |
|---|---|
| **Teece (2010)** | "The essence of a business model is in defining the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit". |
| **Zott and Amit (2010)** | "[…] A system of interdependent activities that transcends the focal firm and spans its boundaries. The activity system enables the firm, in concert with its partners, to create value and also to appropriate a share of that value". |
| **Timmers (1998):** | Includes "An arquitecture of the product, service and information flows, including a description of the various business actors and their roles; a description of the various business actors and their roles; A description of the sources of revenues". |
| **Weill and Vitale (2001)** | "Description of the role and relations between customers, partners and suppliers, main product, information and currency flows, and main benefits between them". |
| **Rappa (2003)** | "The way of doing business that firms are self-sustainable". |
| **Magretta (2002)** | Business models "stories that explain how enterprises work". |
| **Casadesus-Masanell and Ricart (2010)** | It refers to enterprise logic – How it operates and generates and captures value to stakeholders in a competitive market. |

| | |
|---|---|
| **Sorescu *et al*. (2011)** | "A business model is a well-specified system of interdependent structures, activities, and processes1 that serves as a firm's organizing logic for value creation (for its customers) and value appropriation (for itself and its partners)" |
| **Gambardella and McGahan (2010)** | "A business model is an organization's approach to generating revenue at a reasonable cost, and incorporates assumptions about how it will both create and capture value". |
| **Demil et Lecoq. (2010)** | "The business model concept generally refers to the articulation between different areas of a firm's activity designed to produce a proposition of value to customers". |

On the other hand, there are many authors that instead of clearly defining what they mean by business model, they choose to describe the elements they consider to be essential to define it or quoting other authors for the same purpose.

Chesbrough & Rosembloom (2002), referring to technology-based products, claim that a business model assumes the following functions:

- To articulate the value proposition;
- To identify a market segment and specify the mechanisms for revenue generation;
- To define the structure of the value chain required to create and distribute the supply and the complementary goods required in each step of the chain;
- To detail the mechanisms of revenue by which the company will be paid by the offering;
- To estimate the cost structure and profit potential (taking into account the proposed amount and structure of the value chain);
- To describe the company's position within the value network linking suppliers and customers (includes entities to identify potential complementors or competitors);

- To formulate the competitive strategy by which the innovating firm will gain and hold advantage over rivals.

By developing these functions, the authors define the components they consider to be essential to generate a business model:

- Value Proposition;
- Market Segments;
- Value Chain Position;
- Cost Structure and Margin;
- Value Network;
- Competitive Strategy.

*Value Proposition* is the value of the service or product in meeting a customer’s need or solving a customer’s problem.

*Market Segments* are the targeted customers who may be interested in the product or service.

*Value Chain Position* is the role the firm plays in creating and delivering the product or service given its value proposition and its targeted market segment.

*Cost Structure* is the distribution of costs allocated to the various elements needed to produce/create and market the innovation. *Margin* in this context is defined as the difference between the price received by a firm for its products/services and the cost of producing them.

*Value Network* includes anyone else who can add value to the product or service. Value networks can help build momentum around an innovation.

*Competitive Strategy* summarises the competitive strategy for the chosen market. The business strategy goes into more detail. The business model differs from the business strategy. The latter requires more knowledge of the environment and focuses more on how to maintain a sustaining competitive advantage and deliver value to the shareholder.

Johnson, Christensen & Kagermann (2008) believe that a business model consists on a combination of four elements that create and capture value:

1. Costumer Proposition Value;
2. Profit Formula;
3. Key-resources;
4. Key-processes.

*Costumer Proposition Value (CPV)* is a “way to help customers to get an important job done”, where job means a problem that urges to be solved. To define a CPV, the enterprise needs to target costumer, perceive the job to be done and, finally, clarify the offering which will allow fulfilling costumers’ need or problem.

*Profit Formula* defines how the firm creates value for itself while providing value to the costumer. It includes a revenue model, a cost structure, a margin model (the contribution needed from each transaction to achieve desired profits) and a resource velocity, i.e., how well firms uses resources to support to achieve the predicted profits.

*Key resources* are the assets required to deliver the value proposition to the costumer. These may include people, products, know-how, equipment or brand: the issue here is to evaluate which of them create value for the costumer and the company, and to find out the best way to make those elements to interact.

*Key processes* are those which are performed repeatedly and increased in scale, allowing the firm to deliver value for the costumers. Here, it can be included company's rules and norms or such processes as budgeting, manufacturing or service.

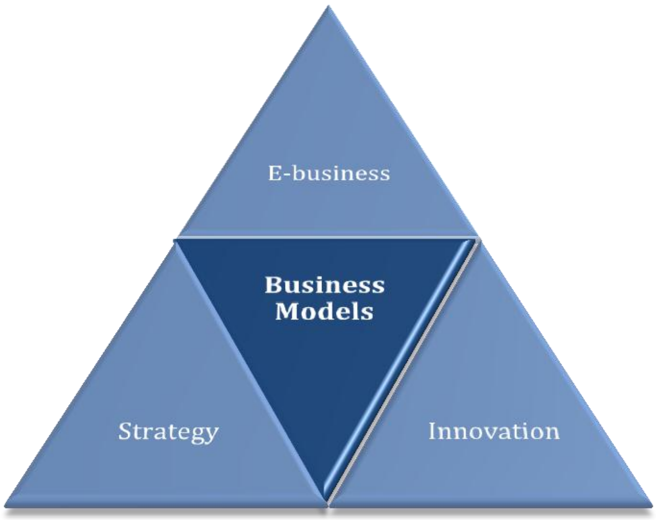
By defining the four components and put them all working together, the authors consider that firms' odds to be successful with their business models will substantially increase. Johnson *et al*. (2008) also warn that firms not always need to rearrange all the components: sometimes, they already have a solid business model structure that only would need some adjustment on a specific component. As they argue, "management judgment is clearly required".

Demil & Lecocq (2010) stand that the business model term is based on the articulation of building blocks, quite similar to those Johnson *et al.* (2008) present, in order to generate a value proposition. The authors consider that this issue can not only be faced on a static way (where the model helps the firm to conceptualise the activities that generate value and what are the mechanisms for that purpose), but also as a transformational and dynamic way, by working as a tool to operate changes at the innovation level. Nevertheless, both approaches are important and interrelated, since the former allows for a consistent view of the multiple components and their organisation, and the latter helps managers to reflect on the need to make changes to the business model.

The concepts presented so far are a small sample of what has been discussed about business models in the last 20 years. The literature review conducted to date, supported by a very detailed study of Zott, Amit & Massa (2010), allowed us to realise that business models are often related to three major subjects: E-business; Organizational strategy; Innovation and technology management. When referring to these subjects, I will refer them, from now on, as the Business Model Triad.

Considering the study conducted by Zott, Amit and Massa (2010), let us see the developments on the literature about each component of the triad.

**Picture 1: The Business Model Triad**




### 3.1. E-business: The Roots of Business Models

The term ‘business model’, as stated earlier, won a great strength thanks to the development of e-business in the mid-90’s, which corresponds to those that are performed using the benefits of new Information and Communication Technologies (ICT). Scholars study this subject in order to understand in which ways companies conduct their business based on the World Wide Web.

Thus, there are several authors proposing variations of possible business models, in order to describe and analyse a significantly different way of doing business. Timmers (1998) was one of the first authors to classify this type of business, cataloguing it in eleven business models in which these new companies could develop the use of ICT. Tapscott, Lowy & Ticoll (2000) developed a typology using the concept of value networks, enumerating five models based on value integration of activities in the respective chains. Similarly, Rappa (2001) classifies these companies in eight different ways, taking into account not only its value proposition, but the way they generate revenue to finance their activities as well.

These and other authors developed a set of concepts and components around the e-business, but where each has its own terminology, making hard do settle a consensus about this issue. In order to solve this problem, some studies appeared with the purpose of providing a terminology that can be widely accepted by the scientific community, known in the business model field as ontology. Ontologies aim to provide a shared, formal and explicit conceptualisation of a business model. An interesting study in this regard is the Osterwalder's (2004) ontology, where the author proposes a formalisation of business model components in terms of its elements, vocabulary and relationships by using some concepts of management literature. Therefore, concepts as networks of collaboration, distribution channels, value configuration and cost structure are seen as inherent to business activities.

Despite the considerable number of studies on business models about e-business, there is not a clear reflection of the relation between the components of the models proposed, which makes it difficult to conclude about the dynamic articulation of those same models and to build a liable, broadly accepted conceptualisation, assuming that this is possible.

### 3.2. Business Models and Strategy: Pursuing Value Generation

The study about strategy is partly focused in what is the best set of activities to companies generate value. Because new technologies changed the relationship of organisations at regional and global levels, by getting them closer them ever, modifying the ways of generating value, scholars of strategy have been using the concept of business model to explain what is value creation in the global economy context.

When thinking about business models in e-business, Zott & Amit (2001) find that value creation is not restricted to the company. They propose four main drivers (the NICE drivers) which can enhance the value creation:

1. Novelty – It refers to the decision of adopting, relate and manage the companies' activities;
2. Lock-In – It reports to business model characteristics that are able to attract and retain customers and partners as active members of the model;
3. Complementarities – It means the existence of some business model characteristics that allow companies to aggregate activities, that will generate more value than if they were developed separately;
4. Efficiency – It refers to certain aspects that could minor the transaction costs.

Clearly, the authors attempt to demonstrate what drives the creation of value beyond the borders of the company, giving to the stakeholders a significant relevance to this goal. This idea is corroborated by Hamel (2000), which states that the creation and capture of value happens at a "value network, which can include suppliers, partners, distribution channels," amongst other actors.

The companies conduct their business in a global competitive environment and that tends to influence the development of its business model. So, it is not surprising that some literature assume that having the right model can work as a competitive advantage. Afuah and Tucci (2001) define business model as "the method by which a firm builds and uses its resources to offer its customer better value and to make money in doing so", thus model should be simultaneously seen as the architecture of firms performance and as its competitive advantage. Still on firms' performance, Giesen, Berman & Blitz (2007) seek to establish a relationship between this variable and business models innovation, developing three categories for this purpose:

1. Industry Models, which means developing innovation on the value chain of a specific industry;
2. Revenue Models, reporting to firms' value generation innovations;
3. Enterprise Models, when considering innovation in the role an enterprise plays in the value chain structure, whether new or existing.

Following this typology, the authors conclude that each kind of innovation boost, in its own way, company's performance. This typology is also useful according to business models innovation, which will be discussed on the next sub-section.

Another key aspect in the literature has been the distinction between strategy and business model. If it is true that a lot of the literature on business models came from strategy referrals, there are scholars arguing that, conceptually, there are differences between it and business models. For instance, Magretta (2002) emphasizes the concepts of cooperation and competition to make the distinction between strategy and business model: the first gives greater emphasis to competition that results from the existence of competitors in the same product-market positioning of the company, while in the second is given preference to collaboration, since the value generation is considerably influenced by non-directly involved in business entities – the role of the stakeholders.

On the other hand, it is noticeable that the concept of business model focuses on the value proposition offered to customers and in all necessary processes and steps for the pursuit of that proposal, which it is not so clear in the strategy perspective – see Amit & Zott (2001), Chesbrough & Rosembloom (2002) and Seddon, Lewis, Freeman & Shanks (2004).

Although conceptually different from strategy, business model influences the definition of company’s strategy. Casadesus-Masanell & Ricard (2010) see the business model as a reflection of the company's realized strategy and Richardson (2008) states that the business model explains how the company's activities are developed to implement the strategy. Metaphorically, Shafer, Smith & Linder (2005) compare this role with the house building: the strategy is how the owners want their house to be and business model is the detail of each floor of the house.

### 3.3. Innovation as Integrant Part of Business Models

Thanks to the developments of the last decades, technology assumes nowadays an important role in firms’ value delivering strategy, whether by improving internal processes or generating new products/services.

Consequently, the business model can be a technology enhancer by unlocking its potential value and converting it in something that could represent an income to firms. A classical case study about these considerations is that elaborated by Chesbrough & Rosenbloom (2002) about the Xerox Corporation. This enterprise exploited and commercialised technologies that were rejected by other companies and, due to that business model, experienced a considerable operational growth. It can be noticed here that the company benefited from its product development competences to satisfy costumers' needs and generate new products through technologies that were not previously seen as profitable by others.

Another conclusion we can take about this concern is that it is not sufficient to improve only by technological developments. In the Xerox case, the company reached good results thanks to its quest in generating a real business model adjusted to technological knowledge and costumers' needs, and not by doing 'pure' Research & Development (R&D) activities. In fact, it is getting more difficult to compete only with R&D due to even shorter product life cycles, which leads technologies to obsolesce faster than they used to in the past. Therefore, companies must build their survival through innovation, which goes far beyond technological improvements. In this regard, Teece's (2010) 'Profiting from Innovation' framework tries to emphasise how important is to outline business models components along with technology strategies in order to capture greater value from innovation. Teece proposes to extreme models:

- Integrated business model – When firms bundle innovation and product together, and assumes the responsibility for the entire innovation value chain. The framework is able to indicate when internal development and commercialisation is necessary.
- Pure Licensing – It refers to outsourced activities. In this case, the framework responds to the appropriability/intellectual property issue, which determine when it is more advantageous for the innovator to license its ideas or production processes.

In the middle of these two models, the author also predicts a hybrid model involving both approaches, stating that such model also needs special managerial concerns.

In the innovation field, the concept of business model represents itself a new type of innovation, as it transcends the more traditional types of innovation in products and processes and where collaboration and cooperation with partners reveal to be important factors. Here, the main contributions have come from Henry Chesbrough. The author introduces the concept of open innovation (2003), which is a concept that foresees input of ideas outside the company that can be turned into new products and/or services. These new ideas may lead to new business models (Chesbrough, 2003, 2010). Continuing his work, the author then introduces the concept of open business models (Chesbrough, 2007b), where companies open their business models not only for exploration and exploitation of ideas from the outside, but also by the use of technologies that are being grossly underused (or that are not at all being used), giving them to external entities that are able to unravel their true value.

Aware that business models innovation is far from an easy process to accomplish, Chesbrough (2010) considers that there are two types of barriers. On the one hand, there may be a difficulty in reconfiguring existing assets to change, by innovating, the business model, and, secondly, there may be a failure of corporate managers in understanding and managing new ideas and/or technologies which are not present in the current business model. This latter issue is acute, leading Doz & Kosonen (2010) to indicate the importance of top management to find, within the organisation, a commitment to enabling the transition from the current business model to that resulting from the innovation process.

### 3.4. Summary of Literature Review

In this section, we were able to understand how difficult it is to define a clear concept for business model. This subject have been a special target for analysis over the last 15 years, yet there is no universally accepted idea of what is a business model: there are many definitions, making it difficult to find one that is accepted by all.

The initial approach on this issue is through the study of the so-called E-Business, where the scholars made an effort to understand how the internet-based firms perform their business in a platform that was not fully explored at that time. For this purpose, academics defined generic business models and typologies that could help to contextualize firms' performance. In spite of introducing concepts that today are inseparable from the business models vocabulary, these studies do not clarify the relationship between the components of the models and between firms and the stakeholders.

Secondly, we conclude that strategy literature is unquestionably related to business models. We observed that matters such as value creation and the relationship between strategy and business performance are part of a current (and important) discussion about business models.

Finally, we discussed the importance of innovation and technology management on firms' competitive struggle in a global market. Innovation is not only about technological improvements, it also refers to an organisational rearrangement of processes and product/ services offering.

## 4. Analysing Typologies

In the previous section, we noticed that scholars have been using business models in more than one context. In fact, this term is used to explain and address different phenomena such as e-business types, value creation or capture by firms, and how technology innovation works (Zott, Amit & Massa, 2010). With regard to our study, the literature shows a wide range of typologies through the different management areas that matter to be critically analysed. Let us try to realise what kind of typologies are; for what purpose were they created and understand what brought back to literature; and what paths can scholars proceed in the future.

### 4.1. E-business

The works elaborated around business models that concerns E-business aimed, in general, to offer typologies which classify similar firms into a specific category. For example, and as mentioned in **3.1.**, Timmers (1998) was one of the first promoters of such kind of work by cataloguing firms in eleven different categories. Considering that "the business model spells-out how a company makes money by specifying where it is positioned in the value chain", Rappa (2001) also classifies companies into nine categories. Applegate (2001) also introduces six business models. **Table 3** shows in detail how these authors classified electronic business models.

**Table 3: A Sample of E-business Model Typologies**

| **Author**<br>**E-business model type** | **Description** |
|---|---|
| **Timmers (1998)** | |
| e-procurement | Describes electronic tendering and procurement of goods and services. |
| e-Auctions | Stands for the electronic implementation of the bidding mechanism also known from traditional auctions. |

| | |
|---|---|
| e-shops | Stands for the Web marketing and promotion of a company or a shop and increasingly includes the possibility to order and pay. |
| e-Malls | Consists of a collection of e-shops, usually enhanced by a common umbrella, for example a well-known brand. |
| Virtual Communities | A model where the virtual community operator manages the gained value from virtual communities – the users. Advertising and membership fees are the main revenues. |
| Collaboration Platforms | A way of doing business by offering tools and information environment for collaboration between firms. |
| Third-Party Marketplaces | A model that is suitable when a company wishes to leave the Web marketing to a third party. Third-party marketplaces offer a user interface to the supplier's product catalogue. |
| Value Chain Integrators | Represents the companies that focus on integrating multiple steps of the value chain, with the potential to exploit the information flow between those steps as further added value. |
| Value Chain Service Providers | Stands for companies that specialize in a specific function for the value chain, such as electronic payment or logistics. |
| Information Brokerage | Embraces a whole range of the new information services that are emerging to add value to the huge amounts of data available on the open networks or coming from integrated business operations. |
| Trust and other Third Parties | Stands for the trust services, such as certification authorities and electronic notaries and other trusted third parties. |
| **Rappa (2001)** | |
| Brokerage Model | Brokers are responsible for establishing interaction between buyers and sellers and facilitate transactions, charging a fee or commission for it. This model includes: Marketplace Exchange, Business Trading Community, Buy/Sell Fulfilment; Demand Collection System, Auction Broker, Bounty Broker, Distributor, Search Agent, Virtual Mail. |
| Advertising Model | An extension of the traditional media broadcast model. The web site assumes the role of the broadcaster and provides content (usually for free) and services (like email, blogs) mixed with advertising messages in the form of banner ads. The banner ads may be the major or sole source of revenue for the broadcaster. The broadcaster may be a content creator or a distributor of content created elsewhere. This model includes: Portal, Personalised Portal, Niche Portal, Classifieds, Registered users, Query-based Paid Placement, Contextual Advertising. |
| Infomediary | Some firms function as infomediaries (information intermediaries) is to assist buyers and/or sellers on their decisions. For this purpose, they collect data about consumers and their consumption habits. They also collect data from producers and their products. The subcategories of this model are: Advertising Networks, Audience Measurement Services, Incentive Marketing, Metamediary. |
| Merchant Model | Wholesalers and retails of goods and services sold on the internet. Sales may be made based on list prices or through auction. Examples: Virtual Merchant, Catalogue Merchant, Click and |

| | |
|---|---|
| | Mortar, Bit Vendor. |
| Manufacturer Model | Manufacturers can reach buyers thanks to the power of the web and thereby compress the distribution channel. This model assumes the following options: Purchase, Lease, License, Brand Integrated Content. |
| Affiliate | Provides purchase opportunities wherever people may be surfing by offering a percentage of revenue to affiliated partner sites. It is a pay-for-performance model – if an affiliate does not generate sales, it represents no cost to the merchant. Examples are banner Exchange, pay-per-click, Revenue Sharing. |
| Community Model | This model is based on user loyalty. Users have a high investment in time and emotion. Revenues can be based on regular contributions of content and/or money. Subcategories: Open Source, Open Content, Public Broadcasting, Social Networking Services. |
| Subscription Model | Users are charged a periodic – daily, monthly or annual – fee to subscribe to a service. Examples: Content Services, Person-to-Person Networking Services, Trust Services. |
| Utility Model | This model is based on metering usage, or a "pay as you go" approach. Unlike subscriber services, metered services are based on actual usage rates. Subcategories: Metered Usage, Metered Subscriptions. |
| **Applegate (2001)** | |
| Focused Distribution | Provide products and services within specific industry or market niche. Here, we have five business models – retailers, marketplaces, aggregators, infomediaries, and exchanges. |
| Portals | Not defined. They include horizontal portal, vertical portals, and affinity portals. These are differentiated on the basis of the gateway access, affinity group focus, revenues source, and costs structures. |
| Infrastructure Distributors | Enable technology buyers and sellers to perform business transactions. There are three categories of focused distributors: infrastructure retailers, infrastructure marketplace, and infrastructure exchange, which are differentiated on the basis of control inventory, online selling presence, online pricing, revenues source, and costs structure. |
| Infrastructure Portals | Enables consumers and businesses to access online services and information. They are further classified into horizontal infrastructure portals (Internet service providers, network service providers and web hosting) and vertical infrastructure portals (producers and distributor application service providers). |
| Infrastructure Producers | Design, build, market, and sell technology hardware, software, solutions, and services. Subcategories are: equipment component manufacturers, software firms, customer software and integration, infrastructure service firms. |

As can be perceived, there has been an effort to understand how companies can perform their businesses on the Internet. Clearly, there is a bigger concern about representing generic business models and developing typologies. On the other hand, this kind of work allowed some authors (e.g. Applegate, 2001) to introduce concepts (or components) that today are inseparable from the study of business models, such as Value Chain, Revenues or Value Proposal. However, there seems to be two major gaps in this thematic area.

Firstly, scholars do not seem to establish a strong relationship between such neighbouring components and their constructs, which hinders the dissemination of the business model concept. Another important issue concerning the e-business literature is related to the evolution of conducting that kind of business. Actually, the main studies about this subject are dated from the mid-90's or the first years of 21st Century, and the way firms perform their businesses on the Internet have suffered considerable changes, namely at the technological level.

These changes in the way companies and Internet users utilise the World Wide Web gained the term 'Web 2.0' with Tim O'Reilly's intervention at the O'Reilly Media Web 2.0 Conference, in 2005, and attracted several supporters since then. Basically, this term suggest that users are no longer passive viewers of content created by firms, but part of the process of the websites contents production. Though, a systematic analysis of the characteristics associated with the Web 2.0 and a reflection of the effects of the power balance shift between firms and users, was not clearly held.

Aware of the importance of such analysis, Wirtz and Oliver & Ullrich (2010) made an attempt to construct a comprehensive Web 2.0 framework that offer firms an assertive picture of the new opportunities and challenges incurred from the new active role performed by Internet users. Then, the authors propose four main factors – social networking; interaction orientation, personalisation/customisation and user-added value – to explain and contextualise the impact of users in e-business models, presenting for each one some key sub-factors that are strictly related to the concepts presented:

- Social networking: Commonly described as structures of human online interactions. Users employ social networks for many reasons, including self-reflection, image building, entertainment and access to relevant information. This trend is associated with four aspects – *social identity, social trust*, *virtual word-of-mouth,* and *increased consumer power*.

- Interaction orientation: It respects to the firm's ability to manage effectively the rising costumer demand for a more intense and authentic dialogue between firm and costumer. Interaction orientation is related to other four key aspects – *costumer centricity, interaction configuration, costumer response* and *cooperative value generation*.

- Customisation and personalisation: Despite being significantly discussed on previous literature about information systems, the authors consider to be important to include in the framework some considerations about customisation, through an inclusive progressive perspective. In first place, *personal customisation* refers to the possibility offered to Internet users of reconfiguring websites according to their preferences and needs. Secondly, *group customisation* is a concept that gives groups the chance to build and enforce new configurations on products and/or services. A particular case is *social customisation*, where e-business firms customise products to distinct social layers (e.g. the *Second Life* platform, where are available a wide range of upper virtual products at almost real world prices).

- User-added value: As the name suggest, it refers to the various contributions given by users in the generation of new products and/or services of e-business companies. The four sub-factors are *user-generated content, user-generated creativity, user-generated innovation,* and *sources of revenues*.

Wirtz *et al.* (2010) crossed this environmental analysis with an e-business model typology – the 4C Model – to confirm how viable this model could be on that time market conditions and to obtain more detailed information about the most important implications of the changes felt by Internet businesses in the recent years, thanks to interviews to 22 managers of e-firms. The 4C Model pretend to be a simple, though holistic, typology specifically developed to Internet businesses and it is settle in four basic e-business models – content, commerce, context, and connection –, each one with its value proposition and revenue streams.

Concerning our study, more important than the results – the authors were able to get answers to their investigation questions – or the e-business typology presented is the path that was followed to conduct this particular study. Unlike previous studies, this one worried about a critical contextualisation of the environment where companies perform their businesses. Despite long and hard, this task seems to prove fruitful not only to provide a suitable typology but also to highlight the evidences scholars are investigating. Consequently, one possible way to move research on this business models field could be based on figure out tools and mechanisms (e.g. PEST analysis) to look deep at the essential factors that could affect the way e-firms perform their businesses, particularly technological development and socio-economic issues, in order to provide more precise and functional labels that could actually give e-managers a picture of their world. In the end, it is all about seeing business models as a dynamic concept.

### 4.2. Strategy

As mentioned in the previous section, scholars have been using the concept of business model to explain firm's value generation and performance in a global economy context and, as a consequence of the current high level of competition between firms, to understand how that concept could be used to gain competitive advantage. No wonder then that many of the contributions for answers in this regard come from scholars and business strategists.

In this field, however, the objective is not to catalogue kinds of strategies (like a 'to do list') to be implemented by firms or to construct a 'successful' business model for a specific company. On the contrary, scholars prefer to point out which factors could, generally, boost firm's value generation. So, concepts like Value Networks, Value Chain, Partnership Networks, Cost Structure, Source of Revenues, Efficiency and Effectiveness, and Competitive Advantage became prerogative subjects around business models.

None of the concepts above are a novelty when the subject is Strategy, but as far as the business model literature is concern, it seems vital to present a wider understanding about these notions and how they work together. Therefore, a rising number of scholars are suggesting, direct or indirectly, that a firm's business model should be seen as a system of activities. An activity corresponds to an engagement of human, physical and/or capital resources to the business model to serve a specific purpose towards the fulfilment of the overall objective and, thus, an activity system is a set of interdependent organisational activities centred on a focal firm, including those conducted by the focal firm, its partners, vendors or costumers, etc. (Zott & Amit, 2010).

It seems logical that managers must make a choice about the activities firms should be involved not only because by the high number of potential activities they could perform but due to the challenges and that choices will obviously influence the business model design. As consequence, Zott & Amit (2010) propose a framework that helps managers to organise their choices and build a coherent business model, which describes, besides the NICE *design themes* drivers (explained already in **3.2.**) that detail the dominant value creation drivers, the *design elements* that are indispensable to a viable business model. The design elements comprise the activity system content, which refers to the selection of activities; activity system structure, i.e., how the activities are linked; and activity system governance, referring to who perform the activities (whether inside or outside the firm).

**Table 4: Zott & Amitt's (2010) Activity System Framework**

| Key Factors | Sub-factors | Purpose |
|---|---|---|
| Design elements | Content | Defines what activities should be performed. |
| | Structure | Defines how should activities be linked and sequenced. |
| | Governance | Defines who should perform the activities (and where). |
| Design Themes | Novelty | Adopt innovative content, structure or governance. |
| | Lock-In | Build in elements to retain business models stakeholders. |
| | Complementaries | Bundle activities to generate more value. |
| | Efficiency | Reorganise activities to reduce transaction costs. |

This activity system perspective is not a Zott & Amit exclusive. Actually, it is recurrent in business model/strategy literature, either explicitly (e.g. Afuah, 2004) or implicitly (Morris *et al.*, 2005; Johnson *et al.*, 2008). This means that the business model is seen as a new unit of analysis, centred on the firm but aware of the inputs the stakeholders can provide for a better performance.

In turn, Osterwalder & Pigneur (2010) went further by constructing a framework based on nine building blocks representing a firm centric, yet boundary-spanning, activity system. The authors not only describe the functions of each block and the respective interdependence with remaining blocks, but they also point out both design techniques and evaluation mechanism (e.g. SWOT analysis) that must be applied to all blocks, in order to guarantee a useful business model.

The business model perspective thus involves simultaneous consideration of content and process, which explains part of the challenge in defining and operationalizing the construct (Zott, Amit & Massa, 2010). The big challenge here is to adopt an appropriate scholar lexicon that fits to managerial tools that allow managers to undertake a careful business model design assessment.

### 4.3. Innovation

The combination of concepts about innovation and business models aims to understand how technology is converted into market outcomes and through networked modes of innovation.

Instead of a set of typologies, the literature in this field mainly offers a set of concepts associated with ways of organisational innovation. In fact, there has been an emphasis on this particular aspect, allowing such notions as open innovation to launch a discussion about the role of enabling the exchange of ideas and resources amongst partners in the co-creation of value.

On the other hand, it is also discussed technological innovation and its implications for generation of revenues. Chesbrough's (2007b) open business models concept, as an open innovation extension to business models perspective, highlights once again the importance of collaboration with partners (or even with competitors) to exploit each other ideas and discover potential economic value. But, ultimately, we have been witnessing a paradigm shift from technological innovation to organisational innovation in this field.

Actually, this shift might be related to a possible attempt of bringing together the innovation concept to strategic and organisational studies. If we consider Zott & Amit's activity system, we can realise that notions from the innovation literature (e.g. open innovation or technological innovation) clearly complement the business model concept, since both are concerned about value capture and/or creation (see in **3.2**. how Giesen *et al.*, 2007, typology fit both Strategy and Innovation literature).

Another reason to the prevalence of this paradigm is due to the lack of an economic theory background to ensure that technological innovation can actually work as a business model component and not only as a complement (see Teece, 2010; and Zott, Amit & Massa, 2010). In fact, the literature is quite rich at stating that technological innovation could be reflected in revenues for firms, but it lacks on showing evidences about how to quantify the economic value (i.e. how much it will increase revenues) of such improvements. Considering this issue, maybe it could be enriching to develop further studies that aim to construct a typology that explains what could be the key-factors that help firms to quantify the economic value of their technological innovations.

### 4.4. Limitations and Future Research

It is reasonable to agree that most of scholar working documents usually come with several limitations. This dissertation is no exception, and I consider it is important not only to enumerate them but also to distinguish them in the two main orders.

In the first order limitations, I primarily realise how recent is the business model literature (as stated in **2.**, the main contributions come from after 1995), and how much diversified, which makes difficult a maturation of such complex matter. Still regarding literature diversity, the literature review (and consequently, the document) was organised into three main areas – the Triad – according to previous reviews, whether explicit (Zott, Amit & Massa, 2010) or implicit (Teece, 2010), in order to contribute for a more accepted terminology.

The second order constrains respect to those that could lead to future research. Throughout this section, it was noticeable that the purpose of typology varies according to the subject of the Triad and each one present its own limitations. Indeed, the business model concept seems to need further theoretical grounding, not only about the business model concept *per se* but also about other related concepts of Economics and Management fields. By doing this cross-fertilisation, scholars may find clues for some unanswered questions I was not able to clarify in this dissertation.

# 5. Conclusion

In the business model literature we frequently find typologies that try to conceptualise a certain way of organising ideas and notions about what a business model should consist.

However, and depending on the subject we are studying, typologies serve specific purposes. Effectively, we found in this dissertation that typologies were primarily used by business models investigators to catalogue firms in common ways of performing their business in the World Wide Web context, and then to understand which drivers direct (revenues, stakeholders, etc.) or indirectly (e.g. innovation) influence the design/ architecture of a business model.

The lacks identified in the Triad's typologies seems to be related to the fact of the business model remains theoretically underdeveloped (Teece, 2010). Despite the efforts in finding mechanisms that could consolidate this concept, the truth is that business model is seen as new unit of analysis and it consequently needs additional support literature. A cross-fertilisation between the current literature and Economics literature, along with some managerial tools, may help scholars to clarify the challenges we identified in the discussion section.

## 6. References


Afuah, A., 2004, “Match your innovation strategy to your innovation ecosystem”, *Harvard Business Review*, 84, pp. 98-107.

Afuah, A., Tucci, C. L., 2001, “Internet business models and strategies: Text and cases”, New York: McGraw-Hill.

Amit, R., Zott, C., 2001. “Value creation in e-business”. *Strategic Management Journal*, 22, pp. 493-520.

Applegate, L. M., 2001, “Emerging e-business models: Lessons from the field”, HBS No. 9-801-172, Harvard Business School, MA.

Baden-Fuller, C. and Morgan, M. S. (2010), “Business models as models”, *Long Range Planning*, 43, pp. 156-171.

Björkdahl, J., 2009, “Technology cross fertilization and the business model: The case of integrating ICTs in mechanical engineering products”, *Research Policy*, 38, pp. 1468-1477.

Boudreau, K. J., and Lakhani, K. R., 2009, “How to manage outside innovation”, *MIT Sloan Management Review*, 50(4), pp. 69-76.

Casadesus-Masanell, R., Ricart, J. E. (2010), “From strategy to business models and to tactics”, *Long Range Planning*, 43, pp. 195-215.

Chesbrough, H., 2003, “Open innovation: The new imperative for creating and profiting from technology”, Boston, MA: Harvard Business School Press.

Chesbrough, H., 2007a, “Business model innovation: It’s not just about technology anymore”, *Strategy and Leadership*, 35, pp. 12-17.

Chesbrough, H., 2007b, “Why companies should open business models”, MIT *Sloan Management Review,* 48, pp. 354-363.

Chesbrough, H., 2010, “Business Model Innovation: Opportunities and Barriers”, *Long Range Planning,* 43, pp. 354-363.

Chesbrough, H., Rosenbloom, R. S., 2002, “The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies”, *Industrial and Corporate Change*, 11(3), pp. 529-555.

Demil, B., Lecocq, X., 2010, “Business Model Evolution: In Search of Dynamic Consistency”, *Long Range Planning,* 43, pp. 227-246.

Doz, Y. L., Kosonen, M., 2010, “Embedding strategic agility”, *Long Range Planning,* 43, pp. 370-382.

Dubosson-Torbay, M., Osterwalder, A., and Pigneur, Y., 2002, “E-business model design, classification and measurements”, *Thunderbird International Business Review,* 44(1), pp. 5-23.

Eriksson, C. I., Kalling, T., Åkesson, M., and Fredberg, T., 2008, “Business models for e-services: Exploring the e-newspapers case from a consumer view”, *Journal of Electronic Commerce in Organizations,* 6, pp. 29-57.

Gambardella, A., McGahan, A. M., 2010, “Business-Model Innovation: General Purpose Technologies and their Implications for Industry Structure”, *Long Range Planning*, 43, pp. 262-271.

Ghazini, A., and Vendresca, M. J., “Keywords and cultural change: Frame analysis of business model public talk 1975-2000”, *Sociological Forum,* 20, pp. 523-559.

Giesen, E., Berman, S. J., Bell, R., Blitz, A., 2007, “Three ways to successfully innovate your business model.”, *Strategy and Leadership,* 35, pp. 27-33.

Gordijn, J., Osterwalder, A., Pigneur, Y., 2005, “Comparing two Business Model Ontologies for Designing e-Business Models and Value Constellations”, *18th Bled eConference – eIntegration in Action,* Bled, Slovenia.

Halme, M., Anttonen, M., Kuisma, M., Kontoniemi, N., Heino, E., “Business models for material efficiency services: Conceptualization and application”, *Ecological Economics*, 63, pp. 126–137.

Hamel, G., 2000. *Leading the revolution.* Boston: MA: Harvard Business School Press.

Hedman, J., and Kalling, T., 2003, “The business model concept: Theorical underspinnings and empirical illustrations”, *European Journal of Information Systems,* 12, pp. 49-59.

Johnson, M. W., Christensen, C., Kagermann, H., 2008, “Reinventing your business model”, *Harvard Business Review,* 86, pp. 50-59.

Johnson, M. W., and Suskewicz, J., 2009, “How to jump-start the clean tech economy”, *Harvard Business Review,* 87, pp. 52-60.

Magretta, J., 2002. “Why business models matter”. *Harvard Business Review,* 80, pp. 3-8.

Mahadevan, B., 2000, “Business models fot Internet-based e-commerce: An anatomy”, *California Management Review,* 42(4), pp. 55-69.

McGrath, R. G., 2010, "Business models: A discovery driven approach", *Long Range Planning*, 43, pp. 247-261.

Morris, M., Schindehutte, M., and Allen, J., 2005, "The entrepreneur's business model: Toward a unifed perspective", *Journal of Business Research*, 58, pp. 726-735.

Osterwalder, A., Pigneur, Y., 2010, *Business Model generation*, Hoboken, NJ, John Wiley & Sons, Inc..

Rappa, M., 2001, "Business models on the web: Managing the digital enterprise" [Online] <digitalenterprise.org/models/models.html>. Accessed: March 2012.

Richardson, J., 2008, "The business model: An integrative framework for strategy execution", *Strategic Change*, 17(5/6), pp. 133-144.

Shaffer, S. M., Smith, H. J., and Linder, J., 2005, "The power of business models", *Business Horizons*, 48, pp. 199-207.

Seddon, P. B., Lewis, G.P., Freeman, P., Shanks, G., 2004, "The case for viewing business models as abstractions of strategy", *Communications of the Association for Information Systems*, 14.

Sorescu, A. Franbach, R. T., Singh, J., Rangaswamy, A., Bridges, C., 2011, "Innovations in Retail Business Models", *Journal of Retailing*, 87S, pp. S3–S16

Tapscott, D., Lowy, A., Ticoll, D., 2000, "Digital capital: Harnessing the power of business webs", Cambridge, MA: Harvard Business School Press.

Teece, D. J., 2007, "Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance", *Strategic Management Journal*, 28, pp. 1319-1350.

Teece, D. J., 2010, "Business Models, Business Strategy and Innovation", *Long Range Planning,* 43, pp. 172-194.

Timmers, P., 1998, "Business models for electronic markets and hierarchies" *Electronic Markets,* 8(2), pp. 3-8.

Weill, P., Vitale, M.R., 2001, "Place to space: Mifrating to e-business models" Boston, MA: Harvard Business School Press.

Wirtz, B. W., Oliver, S., and Ullrich, S., 2010, "Strategic development of business models: Implications of the web 2.0 for creating value on the Internet", *Long Range Planning*, 43, pp. 272-290.

Zott, C., Amit, R., 2008, "The fit between product market strategy and business model: implications for firm performance", *Strategic Management Journal*, 29, pp. 1-26.

Zott, C., Amit, R., 2010, "Business Model Design: An Activity System Perspective", *Long Range Planning*, 43, pp. 216-226.

Zott, C., Amit, R., Massa, L., 2010, "The Business Model: Recent developments and future research". Journal of Management, 37(4), pp. 1019-1042.