

A Critical Synthesis of Scientific Research on Business Models and Business Model Components

Roxana CLODNITCHI¹

ABSTRACT

The current volatile economic environment, globalization and evermore shorter technology cycles impact the way business is done today. Business modelling proves itself as an instrument, which may impact decisively the success or failure of a business. This is why both the business and academic community critically address this issue. The aim of this article is to contribute to the development of a unifying research agenda by synthesising the most relevant scientific research and studies. The author reviewed and analysed the scientific theoretical framework on this subject from the past 15 years. The research result consists in a systematisation on past approaches on business modelling stressing the components as they are defined by contemporary scholars. By doing this, the author aims at reconciling the fragmented and only partially overlapping definition of the concept of “business model”.

KEYWORDS: *business models, business model components, business model elements, business model definition.*

JEL CLASSIFICATION: *L20, M10.*

1. INTRODUCTION

Business model: buzz word or standard? A simple google search for “business model” provides 31.5 million results in less than 0.5 seconds. Thousands of articles published in the main scientific journals worldwide are mentioning “business models”, hundreds address them directly, but still most of them lack to define the “business model” concept, while the proposed definitions only partially overlap. The literature on business models is vast but fragmented. Recent studies are increasingly concerned with “business model innovation”. But can innovation occur without a clearly defined status quo?

The design of a business model constitutes a key decision for entrepreneurs and a key task for managers intending to change and adapt for the future (Zott & Amit, 2010). The scientific literature regarding business models is booming. An aggregated search within scientific journals data bases shows an exponential growth in the number of articles related to business models in the past 60 years – from 5 articles in the timespan 1957-1967 to 51,712 in the timespan 2007-2017. Only a small number of authors however, insist on “business models” within their papers and even a smaller number bother to define the concept. According to one of the latest articles published by Zott and his researcher group, over one third of the articles written by 2011 on business models reviewed by them didn’t define the concept at all. On the other hand, 44% of them were defining business models, mainly by their components (Zott et al., 2011). The relation widely applies to the articles published after 2011, as the research of the author shows. Since existing definitions and the identified business models’ main components

¹ Bucharest University of Economic Studies, Romania, roxana.clodnitchi@fabiz.ase.ro

only partially overlap, this can lead to a multitude of possible interpretations. By performing a focused literature review, this article aims to deliver an overview and systematisation of the relevant past approaches on business models and their main components. Further, it intends to help unify the general research agenda.

2. RESEARCH METHODOLOGY

To achieve a clear overview on the theoretical framework concerning “business models” and their components, the author performed an extensive research identifying the most relevant scientific references dealing with the subject. The research relies on articles published in the main scientific journals indexed in databases like Emerald Management Journals 200, Jstor 2016, PROQUEST Central, SAGE HSS Collection, ScienceDirect Freedom Collection, Elsevier, Scopus, Elsevier and Web of Science - Core Collection, Journal Citation Reports, Derwent Innovations Index, Thomson Reuters.

To accomplish the research objective, the following keywords were used in the search (in English, French, German):

- business model / business models;
- business model components / elements;
- business modelling.

The timeframe chosen for limiting the research was articles published between 2001-2017. After reviewing the articles, the most relevant were chosen to synthesise a comprehensive definition of the concept “business model” and create an aggregated overview of the main business model components.

3. WHAT IS A BUSINESS MODEL

DaSilva and Trkman claim that the propagation of the phrase "business model" along with the "dot.com boom" and the NASDAQ share growth, can show that „business model” was originally just a "buzzword". Initially, the syntax hides the obvious lack of strategy and poor performance patterns of companies, whose stocks have grown, even if they have little or no profits. However, the phrase "business model" survived, and the number of scientific papers related to it remained relatively stable between 2004 and 2007 (between 25 and 42 works per year) and even started to rise to 45, 68 and even 83 works in 2008, 2009 and 2010 (DaSilva & Trkman, 2013). In a closer analysis of the articles’ content, a relocation of the focus from the Information and Communication Technology (ITC) to general business models can be noticed. The term is being used to analyse virtually any kind of human effort with a wide range of interpretations (Ventresca, 2005). Thus, analyses were made on the business models of terrorist organisations such as Al-Qaeda (Vardi, 2010), the possibilities of preserving nature (Sovinc, 2009) and the spread of rare diseases (Ferry, 2010). The phrase is also used in the political and macroeconomic context to discuss the US economy model (Cappelli, 2009).

Even though the phrase "business model" has gained plenty of importance due to the e-business field, especially in the last two decades, the term has been part of the economic jargon since the 50s, when Peter Drucker first introduced the concept (Drucker, 1954). 1957 Bellman et al. use the phrase "business model" in an academic article. They were investigating the construction of business games for training purposes (Bellman et al., 1957) and using the phrase “business model” in connection with the representation of reality - a simulation of the real world through a model. The term has not been widely used for decades. The number of papers published in

indexed journals referring to this phrase remained low until 1990: only five papers containing the phrase "business model" were published in the title (Osterwalder & Pigneur, 2010).

However, over the years the term "business model" has been used by many authors, but without a broadly accepted definition of it. Drucker defines "a good business model" as one answering the questions "Who is the customer and what does he think has value?" And "What is the economic logic that explains how we can offer value to our clients at an appropriate cost?"

Amit and Zott (2001) count among the main theorists of "business models". Trying to clarify the concept, they propose a precise definition, often quoted in literature. They base their definition on virtual market theories, Schumpeter's innovations, value chain analysis, a resource-based vision, dynamic capabilities and strategic networks, and the results of analysing a representative sample of business models in the industry - business in the US and Europe: *"A business model describes the content, structure, and governance of transactions designed to create value by exploiting business opportunities"* (Amit & Zott, 2001).

"The content" of the transaction is both the traded goods or services and the resources and capacities involved. "The structure" refers to the parties involved, their links and how they choose to operate. "Governance" refers to how information flows, resources and assets are controlled by the parties concerned, the legal form of organisation, and incentives for participants.

Hamel proposes a very concise definition of the term "business model" cited by many authors "a business concept put into practice". However, this raises other questions, due to the phrase "business concept" (Hamel, 2001). Magretta defines business models - based on Drucker's definition - as "stories explaining how businesses work" (Magretta, 2002). By extrapolating, we can say that a business model describes how an enterprise identifies and creates value for customers and how some of this value is turned into profit in this process. The definition that business modelling is "business logic, how it works and how it creates value for stakeholders" is embraced by many other authors such as Baden-Fuller, MacMillan, Demil and Lecocq (Casadesus-Masanell & Ricart, 2010). "Creating, offering and obtaining value" is, according to many authors, the main feature of the business model (Johnson et al., 2008; Morris et al., 2005; Osterwalder & Pigneur, 2010; Zott & Amit, 2010).

Casadesus-Masanell and Ricart deepen the issue of the business model by paying special attention to delimiting the concept from other more commonly used in literature, such as strategy, business concept, revenue model, economic model, or business process modelling.

Porter describes the strategy as "how all the elements that make up a company's business fit" (Porter, 2001). This definition seems to be parallel to that of business models: "A system, how to fit the pieces of a business" (Magretta, 2002). Casadesus-Masanell and Ricart (2010) propose the following delimitation:

- The business model refers to company logic, how it works, and how it creates value for stakeholders;
- The strategy refers to choosing the business model through which the company wants to compete on the market;
- The tactic refers to the decisions to take in a company in virtue of the chosen business model.

Starting from the delineation of Casadesus -Masanell and Ricart (2010), DaSilva and Trkman (2013) develop the idea, arguing that the strategy shapes the development of capabilities that may change future business models. The strategy consists in building dynamic capabilities to respond effectively to unforeseen situations in the present and future. Dynamic capabilities are the ability to anticipate, shape, take advantage of opportunities and avoid threats while maintaining competitiveness by improving, combining, protecting and, when necessary, reorganising corporal and intangible assets of society deemed.

The subsequent diagram (Figure 1) presents the framework proposed by DaSilva and Trkman (2013) who argue that the strategy (a long-term perspective) sets dynamic capabilities (a medium-term outlook), which then help potential business models (short term perspective) to cope with unforeseen present or future situations. Thus, the strategy involves the development of dynamic capabilities, capable of responding to the unexpected through the business model of the organisation. Business models are then delimited from the dynamic capabilities of the firm.

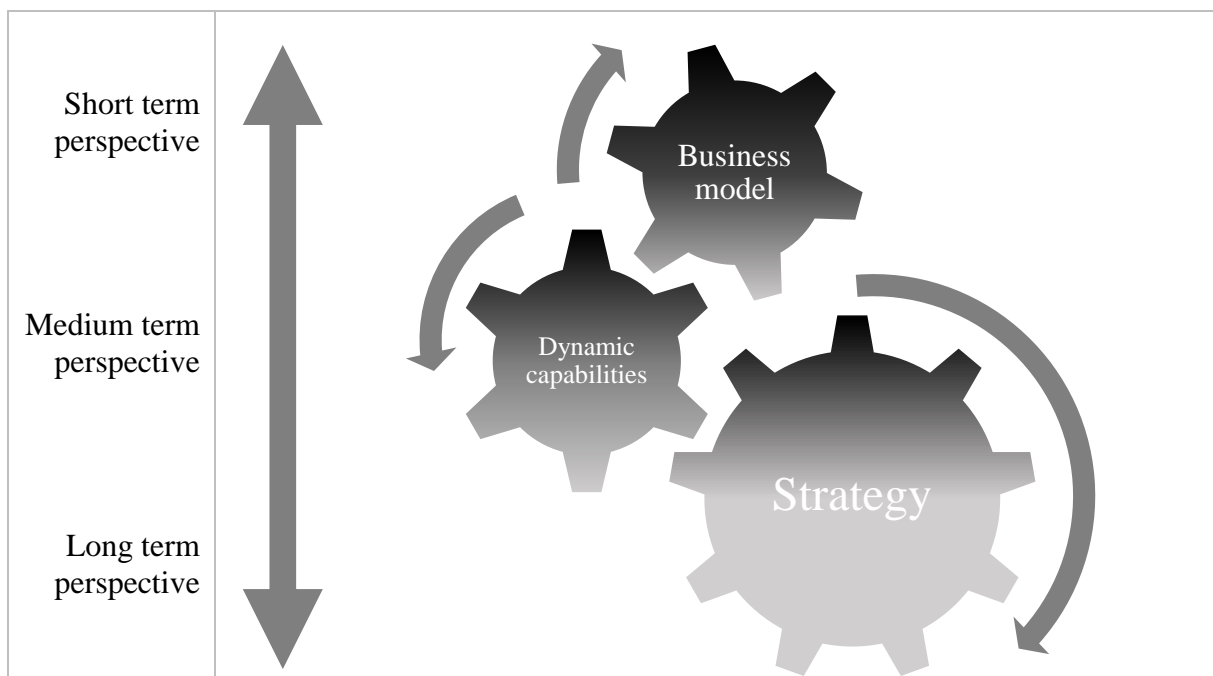


Figure 1. The relationship between strategy and business models

Source: DaSilva & Trkman, 2013

Since the representation of a complete business model is often too complicated, Casadesus-Masanell and Ricart propose two methods of simplifying representations: aggregation and decomposition (Casadesus-Masanell & Ricart, 2010).

Aggregation can be explained simplistically by "zoom out" - a way to look at the business model from the distance, putting together decisions and consequences in larger constructions. In an attempt to analyse a complex business model, the researcher may be unable to process it because of his complexity (there are too many choices and consequences). By "zoom out", though the details are blurred, aggregations of these details become clearer. In this context, identifying "the right distance" for evaluating a given business model is more an art than a science. Looking at the model too close, the overall picture may be lost, looking at it from a too long distance, there is the risk of neglecting all the essential details. In essence, the researcher makes use of theories (hypotheses or beliefs) to provide the links between decisions and consequences.

It is also possible to use model decomposition - when different groups of decisions and consequences do not interact and can therefore be analysed in isolation. Depending on the issue to be addressed, only a few parts of an organisation's business model can be represented.

To sum up the literature review on “business models”, the author designed a proposal of a unified definition, which contains the most relevant aspects of the concept. Thus, a “business model” can be defined as a systematic framework of value creation and delivery to the business’s stakeholders.

4. BUSINESS MODELS’ COMPONENTS

According to Pels and Kidd (2015) companies need to adopt a bottom-up approach in order to achieve economic and social goals. A company needs to understand the components of its business model, especially the ones that need to be modified in order to be successful. But what are the key components of business models and how can we structure them? Looking for the key elements of business models, the articles published in recent years were studied.

15 years ago, Amit and Zott define two sets of issues for creating business models: design elements and design themes. According to them, design elements refer to content, structure and governance while the main themes of design are novelty, lock-in, complementarity and efficiency (Amit & Zott, 2001).

Hamel dedicates in the same period his thesis to the theme proposing another approach in the breakdown of business models in components (Hamel, 2001). Table 1 summarises the defining elements for the business models identified by Hamel.

Table 1. Components of a successful business model according to Hamel

Customer Interface	Strategy	Strategic resources	Value network
Achievement and support Information and understanding Dynamics of relationships Price structure	Mission Product / market target Basis for differentiation	Core competencies Strategic assets Key processes	Suppliers Partners Coalitions

Source: Hamel (2001)

Stähler (2002) also belongs to the early authors who crafted summaries of the essential elements of business models. He identified four main components: the Value Proposition, the Product or Service, the Value Architecture and the Revenue Model. As for the value proposition, he delimitates customers and value partners as business stakeholders. The product or service is viewed as a link between the firm and customers. His model pays special attention to the value architecture. This component addresses issues of:

1. **Market Design**
2. **Internal Architecture**
 - a. Resources
 - b. Value Steps
 - c. Communication Channels and Coordination Mechanism
 - d. Demarcation toward the External Value

3. External Architecture

- a. Customer Interface
 - (i) Distribution Channels
 - (ii) Information about customers
 - (iii) Pricing Mechanism
 - (iv) Communication Channels
- b. Value Partners
 - (i) Active Value Partners
 - (ii) Passive Value Partners
- c. Communication Channels and Coordination Mechanisms

While the above mentioned components define the costs of a business model, the fourth component, the Revenue Model describes the sources and the ways in which firms generate their revenues.

Many authors who address the subject subsequently, propose a similar structure of the elements of a business model to the one proposed by Hamel. Morris et al. (2008), Johnson et al. (2005) and Osterwalder & Pigneur (2010) define business models through sets of very similar elements. These include the following:

- selecting and segmenting customers,
- proposal of value / definition and differentiation of offers (own and outsourced),
- distribution channels,
- customer service,
- income / profit formula,
- key resources,
- key activities / key processes,
- key partnerships,
- the cost structure.

Segmentation and interdependencies between these elements are systematised by Johnson et al. (2008) and by Osterwalder and Pigneur (2010) as presented in Table 2 and Table 3:

Table 2. Components of a successful business model according to Johnson et al.

Strategy	Profit formula	Key resources	Key processes
The target (customers) Activities to be carried out Offer	Revenue model Cost structure The marginal cost model	Personnel Equipment Technology Information Distribution channels Partnerships Brand	Processes Rules Norms

Source: Johnson et al. (2008)

Table 3. Components of a successful business model according to Osterwalder and Pigneur

Infrastructure	Offering	Customers	Finances
Key Activities Key Resources Partner Network	Value proposition	Customer segments Channels Customer Relationships	Cost Structure Revenue Streams

Source: Osterwalder and Pigneur (2010)

Zott and Amit's (2010) adopt 2010 an activity-based perspective, looking into the:

- selection of activities,
- the activity system's structure,
- at the players performing the activities.

Casadesus-Masanell and Ricart propose a systematisation of the business model components in decisions and consequences (Casadesus-Masanell & Ricart, 2010):

- Concrete decisions taken by the management of the organisation as to how it should work and
- The consequences of these choices.

The decision category includes political decisions, decisions about the assets of the company and decisions on the governance structure.

Political decisions address the actions that society takes on all operational aspects such as opposition to the establishment of unions, the choice of locations in rural areas, encouraging employees to choose economy class tickets, the offer of consistent financial incentives.

Decisions relating to company assets refer to choices made on tangible resources, such as production facilities, communication between offices using a satellite system, or the use of a particular type of equipment.

Governing decisions refer to the structure of contracts that determine the decision-making power over policies or assets. For example, the company may make an asset decision to use a particular surveillance system to protect its assets, but may take the governance decision to outsource its operation to a third-party service provider. The study of transaction costs suggests that seemingly small differences in policy and asset governance can have dramatic effects on value creation and / or capture.

Each decision has consequences:

- Attractive incentives influence employee availability and co-operation with colleagues;
- Pricing policies greatly influence the volume of sales, which in turn influences economies of scale and the bargaining power of the firm.

Like Hamel (2001), Casadesus-Masanell and Ricart (2010) propose a representation of business models in tabular form presenting their decisions and their consequences on two columns. Another form of representation of business models is by means of a loop-type causality diagram, where decisions and their consequences are linked by arrows based on causality

theories (Baum & Singh, 1994). Consequences are divided into "rigid consequences" and "elastic consequences". A consequence is elastic if it is very sensitive to the decisions it generates. For example, "high sales volume" is a consequence of choosing a "low-price" policy - if the policy were to change at high prices, the volume could drop rapidly. Instead, a rigid consequence is one that does not change quickly with the choices it generates; so a "good reputation" is a consequence that changes only slowly with the changes of the decisions that generate it (Casadesus-Masanell & Ricart, 2010). Dynamically viewed, business models often generate virtuous cycles through feedback loops that consolidate some components of the pattern at each iteration. By virtuous cycles the authors describe the antonym of vicious circles. While virtuous cycles are not part of the definition of a business model, they can be crucial elements in their long-term functioning. In such cycles, rigid consequences become more important. For example, if sales volume increases (due to a low pricing policy), negotiating power with vendors increases, resulting in a global advantage.

For the dynamic representation of business models, the RCOV model developed by Lecocq, Demil and Warnier (Lecocq et al., 2006) focuses on creating and capturing value. The RCOV model has three components that interact, and the authors point out that they are permanently interdependent and interconnected in a virtuous cycle:

- Resources and Competencies (RC),
- internal and external organisation (O),
- Value propositions (V).

Chesbrough (2010) stress the fact that managers who want to overcome these barriers of business models and experiment change have to be able to construct maps of business models, to clarify the processes underlying them. This approach allows them subsequently to consider alternate combinations of the processes. IBM also develops a map of business models under the key word "component business modelling" (Chesbrough, 2010).

In reference to Zott and Amit's (2010) activity-based perspective, Bocken et al. (2014) define business models by three main elements: the value proposition, value creation and delivery and value capture, which overlaps well with Osterwalder and Pigneur's model (see Table 4).

Table 4. Components of a successful business model according to Bocken

Value proposition	Value creation and delivery	Value capture
Product/Service Customer Segments Customer relationships	Key activities Key resources Channels Partners Technology	Cost structure Revenue streams

Source: Bocken et al. (2014)

The development of a redesign system relies on the existence of a prior generally accepted structure. Osterwalder and Pigneur's (2010) Canvas gained much popularity within the business and academic scene, it neglects however organisational strategies and decision-making processes.

Following the analysis of the literature on business models, a synthesis of their defining elements was elaborated and it's presented in Figure 2.

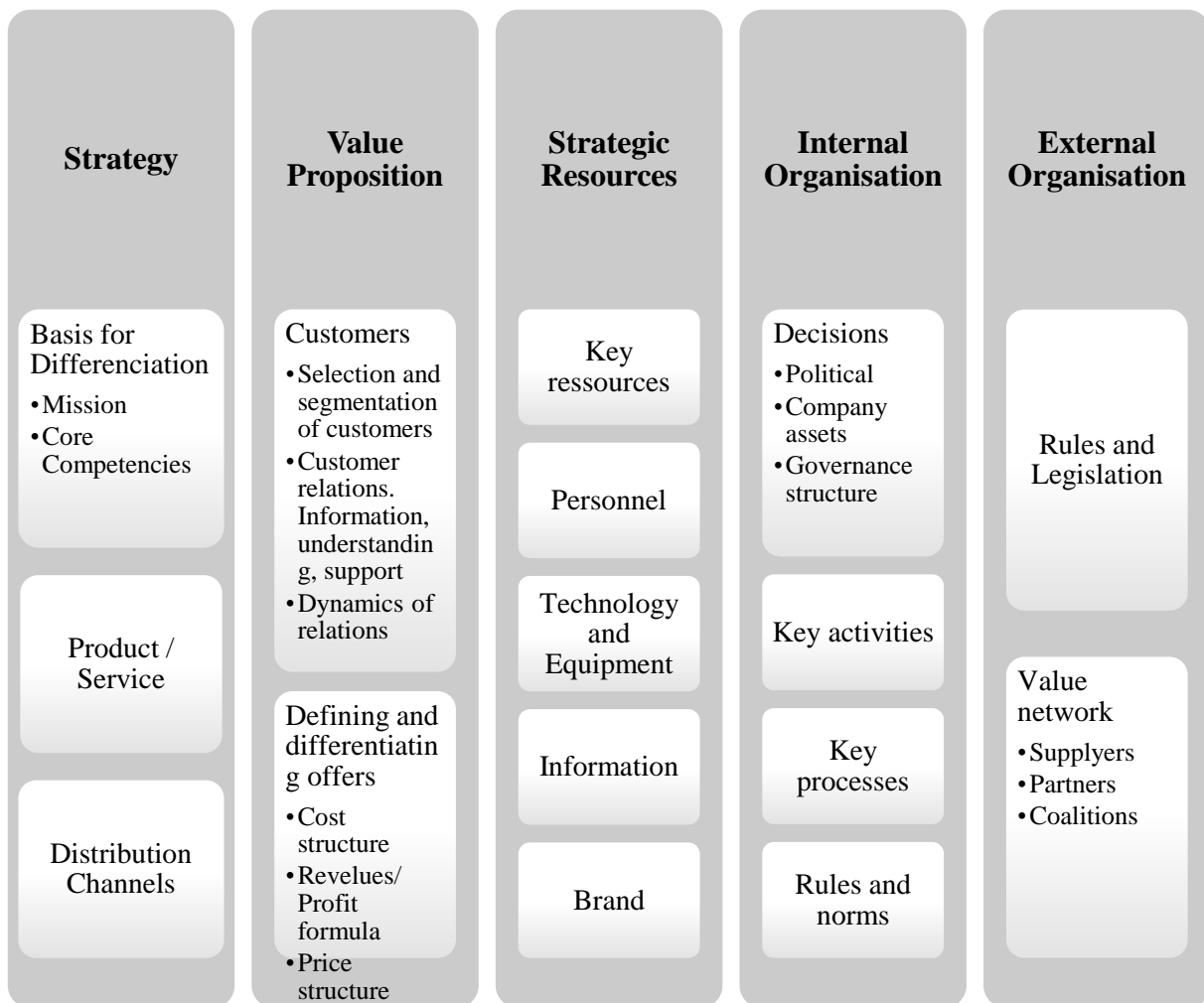


Figure 2. The key elements of business models presented in the literature

Source: Author's own contribution

Value proposals generate the revenues' volume and structure, while the Strategic Resources linked with the internal and external organisation strongly connected to the decision-making process, generate the costs' volume and structure.

Taking the synthesis of business model components into consideration, the initially proposed definition on "business models" of the author will be completed as follows:

"A business model is a systematic framework of value creation and delivery to the business's stakeholders, which includes aspects regarding the business's logic, processes and governance, as well as definitions of the strategic resources and stakeholders".

Haggege et al. (2017), argue that managers need to adopt a more dynamic view. They should emphasise how changing combinations of drivers matter over a firm's life cycle. The performance mechanisms linked to traditional business model components remain, according to them, however instrumental for the adopted business model's success.

5. CONCLUSIONS AND OUTLOOK

Literature on business models has long focused on definitions and typologies, whether from the point of view of strategic management (Amit & Zott, 2001, Hamel, 2009, Casadesus-Masanell & Ricart, 2010, Zott et al., 2011), or of information systems (Ventresca, 2005, Haaker et al., 2017) or innovation management (Pels & Kidd, 201, Chesbrough, 2010). In recent literature, the focus is shifting towards evaluating, testing and re-design of business models and business models components (Haaker et al. 2017).

The value of this paper relies in the synthesis of critical theoretical perspectives concerning the definition of the concept “business model” and its components resulted in the definition proposed by the author and the synthetic overview of the business model components. Through these, there is hope for starting to close the gap between the scattered scientific approaches. In order to develop a unifying research agenda, the academic world has to perform further quantitative review studies coped with case studies from management practices.

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