

GAINING COMPETITIVE ADVANTAGE: THE WIDER IMPLICATIONS OF BUSINESS MODEL FRAMEWORKS

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Abstract The contemporary literature has confirmed growing interest of scientist and practitioners for the explanation of phenomena known as business model (BM). It seems that in recent years there are some convergences in the definition of this concept, increased understanding of the essence of the BM and its role in securing competitive advantage at the market. From the explanation of the basic definition, models, archetype and the frameworks of BM, this paper is further contributing to the rationale of this concept. In addition, the research also depicts CANVAS and Component Business Model frameworks, distinguish their advantages and disadvantages and compare them in order to explain how these frameworks actually can supplement each other. The research is supported with an illustrative example of how the frameworks should operate in practice.

Keywords: Business model, business model framework, CANVAS, CBM.

1. INTRODUCTION

Starting from the middle of 20th century manufacturing industries have experienced huge advancement in technological innovation and organizational transformation [2]. These innovations had their reflection into the organization of companies, value chains and production lines. Rising of new and big industrial complex were immanent characteristic of almost all developed countries in mentioned period. Concentration of work into purpose built “brick and mortar” facilities was practice, hierarchically structured organization was prevailing followed by centralized work places. At that time it was believed that it is better to have all in one place (infrastructure, people, resources) for better coordination, monitor and quality control. Later on, in pursuing for efficiency and effective production, better utilization of resources and optimization of processes, lot of quality management techniques were introduced which helped in reengineering of the processes.

Development of information and communication technology and entrepreneurship at the entrance to the new millennium has completely changed a way how business was conducting. This period (some authors called it as “dot com” era) is also characterized by the emergency of new BMs, the disruption of existing systems, and the reorganization of production, consumption, transportation and delivery system, as it explained in [1].

This new entrepreneurship twist was accompanied with massive stream of literature trying to explain, from scientific and practical view, these new phenomena.

Beside the theoretical explanation of BM concept, and without intention to go into detail and comprehensive literature review, main goal of this work is to investigate further advancement in this field, through interaction of BM frameworks.

The reason for this approach lay in fact that link between BM and organizational form have not been subject of consideration in literature covering BMs, especially questions related to the influence of new BM to the current organizational design [2].

This research analyze the BM archetype (transformation for “brick and mortar” to “brick and click”) and organizational structure as variables for the further consideration. Technology is not in the focus because it is well known that, the average technology in combination with the great BM is more valuable than the opposite case (great technology but average BM) [1].

Namely, it is believed that shortcomings of single BM framework (e.g. Business Model Canvas framework) can be compensated with interconnection with other business model framework (Component Business Model – hereinafter CBM) on the way that second one provide deficiencies of the first one.

Reminder of the work is organized as follows. Firstly several BM definitions are discussed, then in more details two BM frameworks (CANVAS and Component Business Model) will be explained and compared. Thereafter, case study with practical application of said frameworks will be presented. Finally, some concluding remarks and comment, as well as suggestion for further work, will be given.

2. BUSINESS MODEL CONCEPT

2.1. Introduction to business model

The five different perspectives related to BM may be addressed [3]: business model activities, business model logics, business model archetypes, business model elements and business model alignment, which can co-exist and supplement each other.

For the further understanding of the BM definition, all of these perspectives will be briefly elaborated, based on the explanation given in [3]. Business model activities perspective see BM as a set of activities put together to execute strategy. Between these activities there are „logical loops of consequences that creates cycles“, and this is explanation why some of them make sense for a business. For the explanation of business model archetypes just few of them will be enumerate, for example: „razor and blade“, „mortar and bricks“, Nespresso sales of coffee machine, etc. BM as structure is consisting of different “building” elements and will be later detail explained. BM alignment explains that success and failure of the organization is not depended only by the elements but also by the “complementarities, interrelationships and alignment” among them.

For the better understanding of the BM concept, [4] proposed three complement elements (BM definition, BM frameworks and BM classification or archetypes) to be further addressed. BM definition gives us generic and abstract depiction of this concept, while compositional elements in framework explain what a BM is made-off and make “BM more specific and operational.” As far as considering BM classification, confusion can occur due to the fact that criteria for classification of BM sometimes overlap with elements of model, or sometimes classification can refer to full BM (in case of “low cost carrier model”).

The two discours related to the BM may be perceived [5]: operation of business (it refers to the creation and apropriation of value) and dynamic (it referes to the modificaton of BM element). The

dynamic dimension may be analysed through several theories (theories of scale, scope and transaction costs), then through “redesign an organization and its policies so that it stands a better chance of success”, and “adaptive cycle” were company resolve entrepreneurial problem of product positioning, engineering problem of activities and resource configuration and administrative problems.

In the recent past, it has been noticed that modularization of companies activities and products is helpful so it can contribute to the shifting of innovation and operations at the level of ecosystems comprised of firms, individuals and other actors [5].

Beside the helpfulness for the business model definition, these explanations and their combination are also interesting for further details of frameworks and case study, where transformation from one to another archetype is explained.

2.2. Business model definitions

Authors explain BM definition from several angles. The rest of this section is dealing with definitions of BM from several authors who are focusing their definitions around value creation and value capture concept.

A business model BM may be interpreted as the function on how the enterprise creates and delivers value to customers, and in the same time, it converts payment received to profits [6]. Furthermore, additionally explaining the definition of BM through the provision of the logic and other relevant data necessary for business to create and deliver value to customer, together with the inclusion of architecture of revenues, costs and profits associated with the delivering of that value [6].

It may be noticed that there is no widely accepted definition of the BM that conceptualizes a company's BM as a system of interdependent activities that transcends the focal company and spans its boundaries [7]. The activity system enables the company, in relation with its partners, to create value and also to appropriate a share of that value [7]. They introduce the concept of activity system perspective. There are several advantages of this concept: it is natural perspective to be focused on activities in BM design, provide systemic and holistic approach in designing BM instead focusing on individual choices, help in relaxing some activities (in bilateral cooperation among companies some process can be outsourced other not) and provide further understanding of relations between participants.

BM definition was a subject of the research which describes the articulation between different components of BM and building blocks in order to produce a proposition which eventually can generate value for consumers and thus for the organization [8]. Besides the mentioned explanation, the research indicated the possibility to merge together static and dynamic views of BM, through the integration of the strength of both view avoiding the explanation of BM without changes in the organizations and its effect to performance [8].

The detailed review of several BM definitions [4] clearly indicate that comprehensive definition of BM need to include the following elements: customer, value proposition and organizational architecture and economics dimensions. Based on the previously said, concluding definition of BM may be articulated as the BM describes the value logic of an organization in terms of how it creates

and captures customer value; a BM can be concisely represented by an interrelated set of elements that address the customer, value proposition, organizational architecture and economics dimensions [4]. This definition has all necessary components for BM functioning and advance our understanding of BM. As it further explained additionally [4], the target customer with its needs are recognized, value proposition is solution for customer needs, organization solution to resolve customer problem exist together with economic dimensions (financial or non-financial).

Henry Chesbrough in his work logically put his focus on BM innovation, and based on his several previous works at the beginning of the said paper suggests several functions BM need to fulfill [9]: value proposition based on the technology, identification of market segment, definition of the structure of the value chain, cost structure and revenue mechanism, definition of the company position in the value network and formulation of competitive strategy.

3. BUSINESS MODEL FRAMEWORKS

In this part of the paper, the two chosen business frameworks, well known CANVAS and CBM, are explained in details.

3.1. CANVAS Business model framework

The most well-known and widely used framework is the BM Canvas made by Osterwalder & Pigneur [10]. The Business Model Canvas (Figure 1.) is presented as a shared language for describing, visualizing, assessing and changing BMs. It is focused on design and innovation, in particular by using visual thinking which stimulates a holistic approach and storytelling, [4].

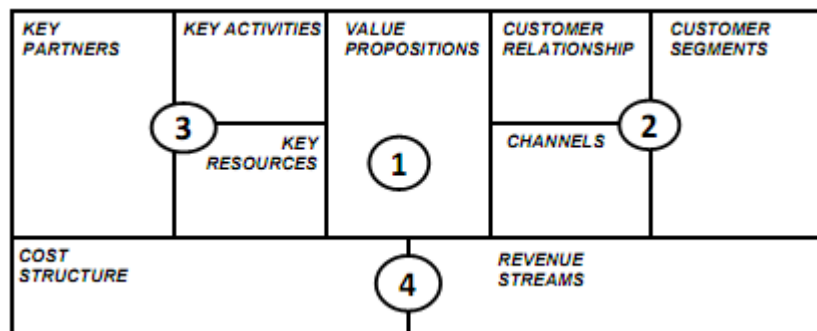


Figure 1. The main components of CANVAS framework [10].

Logical description of CANVAS framework is as follows: Through value creation, company serves multiple customer segments through different channels of communications and developing different partnerships with chosen customer. This approach would contribute to the increase of revenues through direct sale of “created value”. "Value proposition" is obtained by engaging key resources with key activities and through cooperation with key partners. The expenditure structure is also maintained for all the above mentioned elements.

As it depicted on Figure 1, the elements of framework are grouped into four pillars: 1) product (value proposition), 2) customer interface (segments, relationships and channels), 3) infrastructure management (activities, resources, and partners) and 4) financial aspects (revenues and costs).

Presented four dimensions is seen as “rough” categorization of the nine framework elements [11]. This is important for the researchers who would like “to replace nine elements with a smaller number of independent variables” in order to work with less dimensions for better understanding, visualization and removing extra information.

3.2. Component Business Model

Environment within the companies are performing its business have experienced some changes, hence companies needed to adapt its structure and value creation process. Internal structural changes, difficulties in value chain and losing control of the process from end to end, emerging of new start-up companies with whom they need to share market space and fight for the profit and adaptation to new way of communication, all these factors eventually lead to the necessary specialization in the processes and functions, i.e. creation of the components that gives advantage and superiority against the competence.

The road of becoming component based company starts with the process of mapping the current business as a network of components. This means aggregation of cohesive activities that require similar people, process and technology. Result of this process is component map, figure 2. Component map is a grid of vertical and horizontal columns and rows with associated meanings [12].

This component approach have to balance between authority (depicted in horizontal levels), business competency (vertical levels), and yet flexible structure and collaborative environment enabling components to cooperate among themselves and outside the company.

Advantages of this approach are huge: elimination of duplicated and “non-adding valued” activities, automating manual activities, concentrating activities in service center to achieve economies of scale, relocating activities to lower-cost geographies and coordinating activities to reduce cycle times, [12] and [13].

Component Business Model (developed by IBM), depicted at figure 2, is all about creating modular blocks that have following characteristics, according to [13]:

- A component’s business purpose is the logical reason for its existence within the organization, as defined by the value it provides to other components.
- Main goal of the component is to provide value to other components, performing unique set of activities.
- For doing this activities they require resources, knowledge, people and assets to support it.
- Component existing as independent entity with its own governing structure, providing and receiving services.

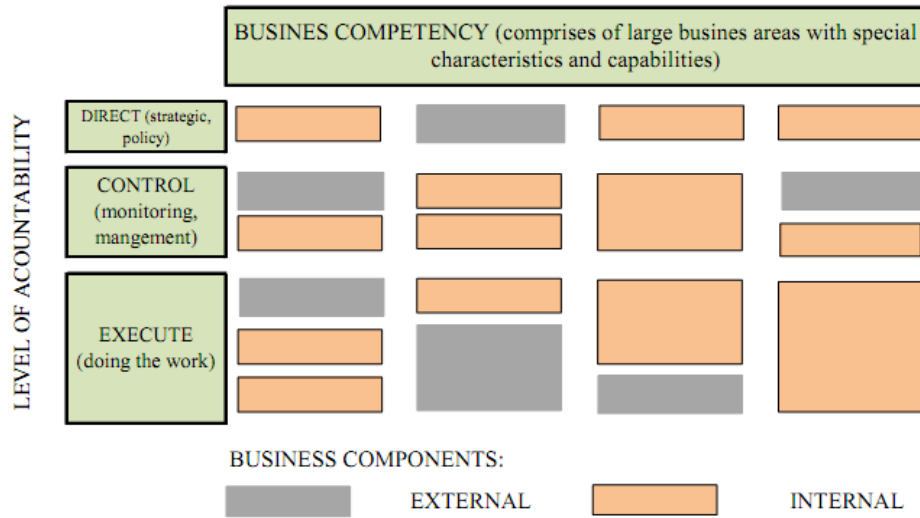


Figure 2. Modular blocks in Component Business Model, [13].

Examples of large business competency areas (functional silos) with special characteristics and capabilities are: manufacturing business (management, design, marketing, logistics, sale), municipality management (city planning, public safety, transport, public works services, municipal management services), or IBM CBM (business administration, new business development, relationship management, servicing and sales, production, financial control and accounting).

4. CASE STUDY

The presented case study is a real case scenario. Due to the long-term established cooperation with local municipality and industrial sectors, authors were asked to help company A in the optimization of the processes. Due to the confidentiality of the data and assets company hereinafter company will be labeled as company A.

Company A is from the automotive industry. Currently, it is going through transition period and is still burden with some heritages from past. That essentially means that company is still organized in the traditional way (hierarchical organizational structure), all activities are mostly related to production, classic supply and retail chain includes dealers and shops, company still trying to control the supply chain from beginning to the end, the final product price is influenced by infrastructure and production costs, focus is on material resources over intangible assets, etc. All said characteristics are well known and referring to the “bricks and mortar” BM.

Since the company is striving to become industrial leader in production off-road vehicles and deliver it to the customers, current situation is no longer suitable for providing market growth. The foregoing states of the company need to include move to the new BM that fit to the contemporary business conditions (translate to the advance “bricks and clicks” model) through the following processes:

- Consideration and at later stages innovation of individual elements of the BM in order to optimize process,
- Observation of the environment, close competition and adaptation to the new trend (external access from the supplier to the company – known as “open innovation” process),

- Opportunity to replace existing production with outsourcing partners to reduce labor costs, infrastructure cost, etc.
- Collecting data about customer segments and processing them (info about purchasing power, habits, interests, communication method, possibility to personalize the offer, etc).

In order to advance to new BM, understand the complex value chain and introduce all elements of BM, suitable solution is CANVAS business framework. Since this framework cannot provide solution for the optimization of the production and internal organizational structure, CBM framework has been developed, too.

4.1. Case study: CANVAS business framework model

As it stated before, company A operated on the principles of the brick and mortar BM, which refers to a company that owns physical assets (buildings, retail stores, manufacturing facilities, warehouses) that is used in business. Company should look for the evolution of this model and it is “mortar and click” model which encompasses some elements of information and communication technologies, while still retain older elements: infrastructure assets, brands, services, etc.

Evolution to the new model can be obtained through the epicenters of BM innovation, [10]. Case study presents multiple-epicenter driven innovation that encompasses changes in three building blocks: value proposition, customer relationship and channels.

KEY PARTNERS Component (car parts) suppliers, Material suppliers, HR agency, QMS agency, Engineering faculties and R&D institutions,	KEY ACTIVITIES Design, Manufacturing, After sail support	VALUE PROPOSITIONS New off-road vehicle with advance technical and performance characteristics and different type of configuration (cargo, passenger transport)	CUSTOMER RELATIONSHIP On-line services (product information, Q&A, configuration option, personal orders), Sale through dilers	CUSTOMER SEGMENTS Government institutions (Military and Police units) Civilan services (firefighting units, ...) Transportation companies,
	KEY RESOURCES Human resources, Intelctual capital (licence), Vehicle plants with special production units		CHANNELS Advertizing (web site, promotions, special newspapers), Periodical vehicle show/exhibitions	
COST STRUCTURE Cost of the acquisition of components, Marketing, R&D, Maintenance cost, Salary, Education cost, Sertification cost,			REVENUE STREAMS Sales (direct sale to customer, Lizing), Maintenance support,	

Figure 3. Company A - CANVAS business framework .

In the figure 3, the new framework is proposed with the following explanation: Through the creation of new value proposition (the new vehicle model), the idea is to serve multiple customer segments (from different industries and public services) through different channels of communication (advertising, mass media, presentation and exhibitions’) and through developing different (new) partnerships with customer (new on-line service with different options, and through dealers sales as leftover from previous model). This approach would contribute to the increase of revenues through direct sale of “created value” as well as additional services (sale of spare parts, repair services...). It is

believed that the "value proposition" is obtained by engaging key resources (intellectual - human, relational, structural; production and infrastructure) in key activities (design, manufacturer and post-production services) and with cooperation with key partners (contractors, suppliers, R&D institutes). The expenditure structure is also maintained for all the above mentioned elements.

Company A offers a new product with related services (maintenance support), which is good and hard to replicate from a competitor. Also this approach enhances customer satisfaction and creates more revenue.

Exposed case study used CANVAS framework model for the depiction of "new" value proposition - brand new product aimed to satisfied customer demands. Also, CANVAS framework model can find its application for the depiction of value proposition related to the upgradable products (one with life extension strategies i.e. modification of existing product) which require a change in the general value proposition structure of standard product [14]. This is clear example of the versatility of the CANVAS business framework.

From other side, CANVAS framework does not explain anything about organizational structure, having in mind that new "value proposal" need to be differently managed. In ordered to overcome this issue, new framework model had to be introduced.

4.2. Case study: CBM approach

During several brainstorming meeting with company management, it was suggested to management to find differentiating activity (components) in their business in order to gain advantage against competitors and that starting point should be top-down review of the processes. Other key actions in finding differentiate activities are: close insight into the customer buying patterns, leveraging on its unique specialties or specific components within its competencies and ability to derive value from its resources, as suggested in [15]. At one moment it was clear to company management that all components cannot bring leverage against competitors and satisfied performances, so they should look outside the company for components that either provides advantage, perform task in adequate and if possible inexpensive way.

Furthermore, managers were advised also to define non differentiating activities (components). As the continuation of previous activity, additional tasks to be done for this purpose are the decomposition of the whole process into the roles, responsibilities and associated costs, [15].

After the complete of the both process it was revealed that:

- Activities like: safety at work, security, equipment and infrastructure maintenance, customer relationship activity, are among those that do not contribute to the position differentiation at the market and hence can be outsourced.
- Components for which company want to have accountability are related to the production process: production and assembly, special treatment process, painting process and laser cutting process. From other side latest three components can be outsourced and give additional income to the company.

It was also concluded that components crucial to the service delivery can be outsourced in order to gain in quality and lower price. After the taking into the consideration all above conclusions, preliminary version of “component map” was constructed, table 1. It is obviously that similar industry will model their competency at different way, but each of the activity need to be under particular competence.

Table 1. Component Business Model framework for Company A.

BUSINESS COMPETENCY / ACCOUNTABILITY LEVEL	DESIGN	LOGISTIC	PRODUCTION	MARKETING & SALES	JOINT AFFAIRS SECTOR
DIRECT LEVEL	Product design planning	Logistic resource planning	Production strategy	M&S strategy	Administrative planning
					Financial planning
CONTROL LEVEL	Technology development planning	Resource monitoring and control	Production resource planning	M&S planning	Financial performance monitoring, appraisal and reporting
	Product and design monitoring and reporting	Resource reporting	Quality management planning	Customer relationship management	Administrative performance monitoring, appraisal and reporting
EXECUTE LEVEL	3D modeling and animation	Internal transport	Production and assembly	Marketing research	Legal process executing
	Prototype development	External transport	Special treatment processes	Sales of product	HR administration
		Warehousing	Painting process	Customer relationship activity	Executing of financial plan
		Equipment maintenance	Laser cutting process		Safety at work
		Infrastructure maintenance	Quality management execution		Security

After the introduction of CBM framework several benefits can be noticed: CBM gives opportunities to exploit existing resources more efficiently, increase in company knowledge about efficient use of it resources can help them to reorganize whole process, components can be a new resource of revenues.

In addition to previously several facts and findings can be pointed out:

- Nevertheless translating real data to model itself posse’s huge challenges, this process is useful in understanding strengths and weaknesses of the business, [12].
- Presented component map is simplified view of company structure, because there are number of others resources that could not be mapped into one component [2].
- Each business case has its own unique perspective about its structure, despite of existing commonality with other players in representing industry, [12].
- Trough the process of developing CBM frameworks, company will identify gaps and redundancy that need to be resolved, [15].

While above presented changes are resulted of intended activities emerged from the gaining knowledge about company internal process, problem began when emerging changes occurs – “unintended and partly beyond managers”. Discussion about this can be found in [8].

For the evaluation of the current state of the organisation, as well as contribution of the components to the enterprise, CBM recognizes “heat map” approach. Within this approach each components is reviewed and evaluated in respect to effectiveness, importance and contribution to the process of company value creation, [16].

Since this work covers the application of CBM framework from organizational design perspective, “heat map” approach will not be further analyzed. Detail explanation about this can be further found in literature [12], [15], [16].

4.3. Business model comparison

Based on the facts presented in the previous chapters on each of the selected BM frameworks, their comparison are given below, table 2.

The nine elements of Business Model Canvas framework create the value chain in order to satisfy the needs of customers. Revenues are the result of a successfully created value proposition that is obtained by using key resources on key activities or collaborations with key partners. Expenditure structures are also managed for the whole activity, and for a successful BM, revenues must be higher than expenditures.

Table 2. CANVAS and CBM frameworks comparison.

CANVAS	CBM
<p>POSITIVE Complete definition of the value chain. Descriptive understanding of the dynamic of the organization. Clear financial picture through the income-expense ratio. Universality of application.</p>	<p>POSITIVE Modification of organizational structure through the elimination of unnecessary resources, functions and processes. Grouping of common functions in one component. Component structure with autonomy in operation. “Heat map” approach as a diagnostic tool for the evaluation of components contribution.</p>
<p>COMMON FEATURES: Open to the application of modern communications technologies in customer service. Provide the implementation of different value proposition strategies.</p>	
<p>NEGATIVE It does not consider the organizational structure.</p>	<p>NEGATIVE Not applicable to all companies. No clear revenue and expense structure.</p>

A completely different picture of the BM framework is obtained when explaining the component BM. The focus is on organizational structure and creation of standalone modules, process optimization (internal, external), specialization and key competencies on which profit is generated, mutual communication of modules (internally and outside the company) through modern information space. This creates organizational and business environment in whose focus is again the customer for whom value is created in the form of faster information, tailored to its needs, created in one place based on a series of input (now grouped) data. On the basis of all the above, it is no wonder that the creator of this

model is an IBM company (data and information processing) and examples of use are most commonly found in the banking sector.

5. CONCLUSION

Existence of different definitions of BMs is clear picture that consensus steel needed. Managers are in situation that they still do not understand BM completely, and how it works. [8].

After the introduction part where basic elements of BM are described we turned our attention to two BM frameworks: CANVAS and CBM. We see these two frameworks rather being complementary then opposed.

Inability of CANVAS to describe organizational design of the company, thing that authors consider relevant for further studying of BM, were overcome by introducing of CBM. Since the basic idea was to show the potential for combination of BMs, both of these models were not presented in all details but more in general terms.

Integrated approach covers missing link between BM and organizational design. This is especially important in situation when transforming from one BM to another requires shift to new organizational design to support new business.

In order to compete at more demanding market companies need to focus on its core competency. CBM is good way forward. Those who do not understand these new demands will not be longer in position to exist at the market.

BM (archetypes or frameworks) also need to evolve in order to allow additional innovation related to product or process innovation, as well as inclusion of new Information Communication Technology that provide network collaboration and open innovation strategy to secure involvement of external technologies. The global connectivity platforms have forever changed way how business is doing.

One of the aims of this work was to stimulate further investigation of the possibility for the combination and interaction of different business frameworks in order to overcome negative or missing aspects each of them. Also, future research should be directed to company market growth in the terms of compliance quality model and BM in the different stages of the company development (infant or after growth period).

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