
The Transformation of the Business Model of SMEs due to COVID-19 Pandemic

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Abstract:

Purpose: The aim of the research was to identify changes that have occurred in the business models of enterprises as a result of pandemic COVID-19 situation as a Black Swan.

Design/Methodology/Approach: The method used was case study. The research tool was an in-depth interview questionnaire - based on the Business Model Canvas structure. The research sample consisted of 31 entities from the sector of small and medium-sized enterprises.

Findings: The interview showed that, the impact of the pandemic is not uniform and depends on the industry and territorial determinants of individual enterprises (both internal and external). There are industries and organizations that are resistant to significant changes in the environment.

Practical Implications: The practical nature of the research is related to determining the regularities in the transformation of business models in case of an unforeseen event of high destructive force (Black Swan), so as to quickly adapt the organization to the new circumstances of the environment.

Originality/Value: It should be emphasized that despite numerous analyzes related to the impact of the pandemic on economic activity, no modifications, changes or actions taken in response to the pandemic have been confronted so far, based on a structured business model (eg Canvas). The added value of the article is related to the identification of the regularity of changes in selected areas of the model .

Keywords: Business model, business model canvas, the transformation of the business model, Black Swan, COVID-19 pandemic, SMEs.

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1. Introduction

Two years ago, most entrepreneurs were convinced that they knew the environment in which they operate very well. There could be some unusual situations, but as a rule there was a sense of market stability, "security", especially for entities with an established position or many years of experience. However, it was in this conviction about the stability and knowledge of all emergency situations that the global pandemic began. It can be said that recipients suddenly stopped orders, suppliers were unable to meet their contracts, employees feared dismissal, and in addition, the authorities announced a lockdown and closed borders. As a result, an unexpected event of major devastating power for the business environment occurred, known as the Black Swan (see section 2).

In order to stay on the market, it was necessary to undertake a wide range of activities, from implementing solutions ensuring work safety and stabilizing the financial situation of enterprises, to strategic thinking about the future. On this basis, it can be indicated that there was a need to modify the business concept, verify financial flows, groups of recipients, or methods of reaching customers with the offer.

The aim of the article is to identify the changes that have occurred in the business models of enterprises as a result of the pandemic of rank of Black Swan. From the utilitarian point of view, it is reasonable to establish the correctness of the transformation of business models. In this article, the analysis and research will be based on the Business Model Canvas (see Chapter 3). The areas where the greatest changes have been found will be searched. Thanks to this, it will be possible to develop recommendations for business practice in terms of developing additional options for action in the event of unexpected and "destructive" sequences of events that may disrupt economic activity.

2. Pandemic COVID-19 as Black Swan

"Black Swans are unpredictable and irregular events of enormous scale and powerful consequences, unexpected for any observer - usually referred to as a turkey - if they not only surprise but harm him" (Taleb, 2007). It should be noted that the specific and unique series of events of cause – effect relationship creates events of the rank of Black Swan, which the difficulty to predict the result of concentration on the meaning of the ordinary, and therefore the standard model prediction, interpretation, and even a careful analysis of the environment cannot detect them or measure the possibility of such shocks. This phenomenon is considered unlikely, practically impossible, however, it appears from time to time and has a colossal impact on the socio-economic reality (Taleb, 2010; 2012; 2018).

The COVID-19 pandemic in the opinion of many researchers fits the definition of the Black Swan. The epidemic took the world by surprise. Questions arise about

the future of the economy and why contemporary economic theories are unable to answer the challenges that have arisen (Reddy, 2020; Wyns, 2020; Mazzucato, 2020).

The pandemic has already marked its different impact on the situation of individual sectors of the economy. In the first place, it hit the areas of the economy closely related to the spatial movement of people, i.e., tourism and transportation, secondly with the movement of goods, i.e., trade. The declines are also affecting the global financial markets (Grima *et al.*, 2020; Khan *et al.*, 2020).

The COVID-19 pandemic influenced, among others, the economic situation - growth, gross domestic product, international trade, economic indicators, real estate market, energy commodity market, financial indicators and the social situation - both globally and regionally (Antipova, 2021; Prognoza ..., 2020; PwC, 2020; Georgiadis, Lockett, and Rocco, 2020; McCann, 2020; Briancon 2020). Therefore, it caused significant changes in both the economy and social life, the need to adapt business to the new market situation, and also forced a revision of the existing business model, so as to at least minimize the negative consequences and focus on survival, and sometimes even benefit from the new mode actions.

3. The Specificity of Business Model Canvas

In the literature on the subject a lot of definitions of a "business model" are presented (interchangeably used the terms "business model" or "model of conducting business activity"). In general it can be said that this is the explanation of how the company operates (Magretta 2002; Arend, 2013), method of monetization of a business idea (Kozminski, 2004), or the presentation and how business creates and delivers value for both customers and organization (Johnson, 2010).

It is worth mentioning that a business model is more than just a good and logical way to do business, because it should take into account the needs of recipients, be unique, embedded in the realities of the environment and the specificity of the organization (Teece, 2010). Referring to the analyzes of Zott, Amit, and Massa (2011) conducted on the basis of 103 publications on business models, three perspectives can be distinguished:

- e-business, information systems and internet applications in organizations - relating to internet enterprises;
- innovation and technology management - relating to technological enterprises;
- strategic issues related to value creation, competitive advantage and enterprise performance - relating to all enterprises.

From the point of view of the subject of this article, the last approach is of particular importance - relating to the aspects of strategic formulation of assumptions and business values. It was during the COVID-19 pandemic that the aspects related to the approach to generating revenues, planning costs, targeting the offer to the right target groups, determining the main values of the organization, key partners - could have been subject to modification. An example of an approach corresponding to these variables is the Business Model Canvas (BMC) developed by Osterwalder and Pigneur (2013), which was chosen as a business structure in which transformations can occur. It consists of nine components, the characteristics of which appear in numerous studies (Markkula, 2005; Norin and Furness-Lindén, 2008; Penttinen *et al.*, 2011; Erlandsson, 2013; Häggström *et al.*, 2013; Ager 2014; Eriksson 2016), segmentation of clients, value proposals, customer relations, communication channels, key resources, partners, revenue structure, cost structure.

One can cite the results of research, related to changes in the functioning of the organization or strategic management in the time of the COVID-19 pandemic, regarding the focus on the use of Internet communication channels, maintaining contact with the "entrepreneurial ecosystem", implementing crisis management, focusing on survival, as well as broadly understood flexibility, related to the uncertainty of the environment. Differences in the transformation of business models result not only from the resources, scale of operations, previous experience or industry, but also from the location (Liguori, Bendickson, Solomon and McDowell, 2019; Liguori and Pittz, 2020; Alves, Lok, Luo, and Hao, 2020; Meahjohn and Persad, 2020; Brown and Augusto, 2020; Fabeil, Fzlinda, Hanim, and Pazim, 2020; Wach, Stephan, Weinberger, and Wegge, 2020; Veselovská, 2020; Cyplik, Tobała, Kopeć, and Hadas, 2020).

However, until now there was no comparisons of modifications, alterations, or actions taken in response to the pandemic, based on a structured business model (eg. Canvas). The added value of the article is related to the potential determination of the tendency to changes in selected areas of the model, caused by events that are difficult to predict.

4. Methodological Assumptions

The aim of the research was to identify changes that took place in the business models of enterprises as a result of the pandemic (an unexpected situation with a large destructive force for the business environment), based on the opinions of entrepreneurs.

In the course of collecting the research material, the case study method was used. In-depth interviews with respondents were conducted in June 2021. The research sample consisted of 31 entrepreneurs from the sector of small and medium-sized enterprises, who did not suspend or liquidate their business activities during the pandemic.

5. Results

An analysis of the responses to individual questions contained in the interview questionnaire was carried out. In case of an affirmative answer, respondents indicated range of changes and/or action taken. The results are summarized in Table 1.

Table 1. Summary of results in terms of changes and / or actions taken in individual categories covered by the study.

Research question (categories of examined aspects)	Number of "yes" answers (n = 31)	List of changes made and/or actions taken
Have you noticed any changes in the area of key partners?	11	<ul style="list-style-type: none"> – shortage of materials – the increase in raw material prices – the suspension or termination of cooperation with existing suppliers
Were new key activities undertaken?	12	<ul style="list-style-type: none"> – periodic production stops for several weeks and new procedures for handling the procurement process – warehouse expansion – searching for new customers and/or equivalent services that can be provided in the conditions of pandemic restrictions – searching for and acquiring new suppliers – transition of some employees to remote work
Have you noticed changes in the value of the organization?	0	<ul style="list-style-type: none"> – efforts were made to maintain the specific values of the organization, therefore no changes were recorded in this area
Have you noticed any changes in your relationship with your customers?	10	<ul style="list-style-type: none"> – increase in customer dissatisfaction due to delays in deliveries – offering new storage services to regular customers – increasing the intensity of communication, on-line communication – renegotiation of contracts (payment terms and terms of cooperation)
Have you noticed any changes in the area of customer segmentation?	8	<ul style="list-style-type: none"> – focus on service quality only in the case of key clients – introducing new products as a reaction to changing customer needs
Have you noticed changes in key	11	<ul style="list-style-type: none"> – optimization of the production process in order to reduce costs – purchase of machinery and equipment to

resources?		expand the scope of services in connection with the need to adapt to the market
Have you noticed any changes in the reach channels?	11	– use of online channels to reach a potential customer with information, e.g. <i>social media</i>
Have you noticed changes in the cost structure?	14	– a very significant increase in the cost of materials and raw materials – "freezing" of cyclical wage growth.
Have you noticed any changes in the revenue structure?	21	– increase or decrease in revenues – a decline followed by a "rebound" effect and a significant increase
Have you noticed any other changes in the business model?	4	– acceptance for remote work (including meetings with clients) – the unstable situation on the market forces ad hoc measures with a short planning horizon
Assessment of the usefulness of the Canvas model in the scope of creating and analysing the profile of the company's functioning	Scale: 1 to 5 (1 - completely unhelpful; 5 - very useful) – <input type="checkbox"/> Average value = 3.81 – <input type="checkbox"/> Mode value = 4 – <input type="checkbox"/> Median = 4	

Source: Own creation.

The research included 31 case studies of enterprises from the SME category, operating both internationally and domestically and from various industries. The diversified selection of enterprises was aimed at obtaining information on a wide range of activities undertaken by enterprises in the event of the destructive impact of a pandemic on their various business models. The obtained results constitute the basis for determining the typical scope of activities undertaken by business entities and the formulation of guidelines for the modification of existing or designing new business models.

The analysis of the test results (Table 1) allows to identify a number of events. In terms of *key partners*, 11 out of 31 analyzed cases saw significant changes in their respective enterprises. Generally speaking, these changes were related to the breakdown of supply chains in terms of price increases and problems with the availability of materials. At the same time, the relationship between these changes and the *key actions* taken can be noticed. These activities focused on rebuilding supply chains and increasing buffer stocks, i.e., they were aimed at rebuilding or maintaining value for the customer in the form of a high level of service.

In terms of changes *in customer relationships*, on the one hand, we can observe an increase in customer dissatisfaction due to delays in deliveries, and on the other

hand, an increase in the intensity of communication and closer cooperation between suppliers and recipients. In the category of changes in *customer segmentation*, there were not many different events. In general, in companies that have taken action in this aspect, two main trends can be distinguished:

- change of service standards (focus on the key customers);
- extending the assortment offer and/or modifying the offered products.

The analysis of the aspect of changes in *key resources* allows the conclusion that it is mainly related to the correction of market offers and the need to reduce costs. The analysis did not take into account changes in resources resulting from previously launched projects (before the outbreak of the pandemic).

The changes in the category of *communication channels* consisted primarily in the introduction of an online channel to reach the customer with information, in particular greater intensity of using *social media*.

Very important and frequent changes were recorded in the categories of *cost structure* and category of *revenue structure*. Enterprises recorded a significant increase in the cost of raw materials, which often upset the cost structure and profitability. In response to the increase in the cost of raw materials, the measures to “freeze” cyclical wage growth. What needs to be noted in the surveyed group of enterprises are those in which there was an increase in revenues (e.g. the food industry) and those in which there was a decrease (services, make to order). This fact proves the varying resistance of industries to the pandemic phenomenon.

Apart from the above-mentioned changes, there were, among others, acceptance for remote work (including meetings with clients). After that, the unstable situation on the market has forced businesses greater flexibility, adopting the logic of ad hoc and short planning horizon as a response to the prevailing uncertainty.

The last researched aspect was to evaluate the *usefulness of the model Canvas* for creating and analyzing the profile of the enterprise. In the opinion of specialists from the surveyed companies, this is a useful tool for this purpose. The analysis of the mean value of its assessment, mode and median (Table 1) shows a high agreement of experts' opinions.

6. Conclusions

To sum up, the results of the research conducted for the analyzed case studies and general conclusions can be formulated. The most important of them are the following statements:

- the changes affected selected enterprises, which allows for the formulation of a hypothesis (for the need for future quantitative research) that the impact of the pandemic is not homogeneous and depends on the industry, territorial scope and conditions of individual enterprises (both internal and external),
- it is possible to determine the correctness of changes in the transformation path, identified by the following variants:
 - 1) no need of transformation - industry and organization-resistant event of a Black Swan;
 - 2) partial transformation - concerning, first of all, customer review and adjustment of the organization's resources to changes in the environment;
 - 3) full transformation - including changes in the structure of costs and revenues - initially there is an increase in costs, with a simultaneous decrease in revenues, as a result of which there is a focus on new market segments, investments are carried out and thus the "organization is reborn"; a variant in which revenues increase with the onset of Black Swan may occur, because it generates additional demand for products or services of the company.

The conducted analyzes may contribute to a more effective adaptation of the organization to critical changes in the environment by identifying particularly sensitive areas from the business model.

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