The Dynamics of Knowledge in the Implementation Of The Distribution Channels Changing Project Under Conditions of the Covid-19 Pandemic: A Case Study

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Abstract: The purpose of the study is to identify and evaluate the impact of knowledge dynamics processes on the effectiveness of the project implementation of changes in product distribution channels under conditions of the COVID-19 pandemic. Implementation of changes is a result of external circumstances related to the COVID-19 pandemic. Adaptation activities can be based on project management aimed at changing existing distribution channels in a turbulent environment. With reference to the considerations presented in the study, it can be pointed out that knowledge management processes allow to observe and describe changes in the environment, indicating the justification of emerging threats and opportunities in the company's environment and the company's response, particularly under COVID -19 pandemic conditions, which fills an identified research gap. The implication from the research is that there is a significant impact of external conditions, shaped by the COVID-19 pandemic, on the implemented project of changing sales in different distribution channels, which can be neutralized by the effectiveness of knowledge management in the company. The research methods used to achieve the stated objective are literature study, descriptive analysis and case study. The empirical research was based on a company making its sales in the European market. The study period was 2018-2020. The research problem is important and current issue because of possibility of achieving companies knowledge increment and increase the effectiveness of project implementation in the perspective of changes in the external environment.

Keywords: dynamics of knowledge, change management, development strategy

1. Introduction

One of the key aspects of managing a business is addressing the challenges of adapting the business to a changing environment. Implementation and realization of change management project, caused mainly by external factors, is inseparably connected with one of the basic objectives of company's functioning, which is to realize sales on served markets.

The article aims to learn about and evaluate the implementation of the project of changes in product distribution channels implemented under conditions of pandemic COVID-19 sales. The volatility of the environment accelerates the processes of learning and integrating knowledge available in a company. Moreover, the increase in knowledge observed in pandemic conditions determines companies to change, especially in the area of distribution channels. The presented study refers to the project management of change in the area of product distribution channels. The research was conducted on the basis of an enterprise, realizing sales in e-commerce channels, for network and other customers. The research question whether the increase in knowledge about changes in the business environment, related to the commonly occurring pandemic phenomenon, has become the cause of the implementation of projects changing the management of the enterprise, implied by the change of product distribution channels, should have been broken down in a few smaller sub-questions in order to better structure the analytical part.

(research question) Has the increase in knowledge about changes in the business environment, related to the commonly occurring pandemic, become the reason for the implementation of projects changing the management of the enterprise, implied by the change of product distribution channels?

The research question was broken to better structure the analytical part;

1. whether the commonly occurring pandemic has become the reason for the increase in knowledge about changes in the business environment?
2. whether the increase in knowledge about changes in the business environment has become the reason for the implementation of projects changing the management of the enterprise?
3. whether the implementation of projects changing the management of the enterprise led to a change in product distribution channels?
2. Dynamic Capabilities in terms of project management

The search for a better understanding of the extract of dynamic capabilities is the result of continuous adaptation of enterprises to the conditions of the economic environment. In the literature on the subject, it is assumed that dynamic abilities reflect wisdom acquired on the basis of basic competences (Prahalad et al, 1990), knowledge of architecture (Henderson et al, 1990), or architectural competences (Henderson et al, 1994). It is worth noting that the concept of dynamic capabilities is linked to the process of market dynamics, as companies operating in a turbulent environment must modify existing knowledge in order to implement change projects that enable solving current problems (Eisenhardt et al, 2000; Wang et al, 2007). Changes caused by the COVID-19 pandemic are particularly important for knowledge growth, as they can help in the search for market advantages (Brusoni et al, 2001).

The volatility of the business environment, implies at the same time instability and the need for projects that adapt the business to the challenges of the economic environment (Kerzner, 2021). Volatility of conditions, which is characteristic of the modern economy characterized by the frequency of occurring transformations with significant scope and effects, which is generally referred to as turbulence (Brown et al, 2008; Tiganas, 2011).

The volatility of the economic environment caused by the COVID-19 pandemic, and the related uncertainty observed in the economic reality, implying at the same time instability, are features associated with the functioning of enterprises, visible especially in the product distribution channels operated. It means that, when everything is stable, while all variables are constant, the knowledge algorithm is stationary (North et al, 2018).

The ability to implement change projects is classified as a dynamic intangible resource (Bontis et al, 1999). According to Teece, dynamic capabilities are high-level competencies that determine a firm's ability to integrate, build and reconfigure internal and external resources and competencies in response to the changing business environment (Teece, 2007). The essence of these capabilities is not only the possession and use of resources, but also their development and renewal, which are possible through organizational learning processes (Łęgowik-Świącik 2021). Zollo and Winter, on the other hand, emphasize that dynamic capabilities are learned and enduring patterns of collective action through which an organization systematically creates and modifies operational routines to improve performance (Zollo et al, 1999; Venczel et al., 2021). Thereby, the core component of an organization’s dynamic capabilities becomes the organization’s ability to change (Haas et al, 2018). This means that organizations have a specific configuration of resources, structures, processes, procedures that enable efficient design and implementation of not only a single change project, but a whole bunch of changes.

Despite the differences in defining the organization’s ability to change, some characteristics of this construct can be observed. In addition, knowledge of the changes taking place (Bratianu, 2007) from the perspective of an organization’s ability to change is particularly important in the dynamic environment created by a COVID-9
pandemic, where rapid and effective change is critical for survival and growth (Judge et al., 2009; Kok et al., 2012).

3. Identification of events that affect the volatility of the environment

The ability of an organization to implement a change project is a construct that resolves the peculiar conflict between change and stabilization, between exploitation and exploration, because it implies making changes and successfully maintaining daily activities at the same time (Meyer et al., 2006; Takagi et al., 2019). The ability of an organization to implement a change project is a construct that resolves the peculiar conflict between change and stabilization, between exploitation and exploration, because it implies making changes and successfully maintaining daily activities at the same time (Meyer et al., 2006; Takagi et al., 2019). Situations that threaten the continuity of long-term business operations that require the implementation of change projects can include for example natural disasters (earthquakes, tsunamis, typhoons and hurricanes, floods, volcanic eruptions or the occurrence of pandemics) (Kagaya, 2013).

The oldest typology of crises allows to distinguish two groups, the first one is crises caused by natural causal relations, the second group is related to crises caused by human activity (Otola, 2013). Additionally, B. Rike distinguished three groups of crises: natural, human-related and social (Rike, 2003). The presented classification criterion does not fully reflect the reality in which companies currently operate. I. I. Mitroff and M. C. Alpaslan attempted to classify contemporary threats and crises, which is presented in Table 1. The classification of threats to enterprises, presented by the authors, resulted from the conducted analysis of crises. The authors found that in the 1980s crises were mainly caused by the occurrence of typical hazards, while in the 1990s crises caused by atypical and natural hazards dominated (Mitroff et al., 2003).

From the above discussion, it is clear that both opportunities and threats are the result of an event or combination of events that occurred at a particular point in time (Meadows et al., 2022).

Change, triggered in the case studied mainly by the variability of the environment, also creates opportunities. Thus, the attitude of enterprise managers to the implementation of the change project, as a multifaceted determinant of enterprise management, appears as a significant challenge in the process of managing a modern enterprise. Businesses in times of pandemic are forced to develop skills, systems and processes to quickly exploit and anticipate sudden environmental volatility and recognize the dangers and opportunities presented by chaos.

The concept based on the implementation of a project of changes adapting the company’s resources to the environment characterized by constant change, was also presented by J. Schumpeter. This author noted that the innovation process is, on the one hand, the renewal of the economy, and on the other, "creative destruction" (Hartung, 2011). The essence of creative destruction is the continuous internal revolutionization of economic structures and existing technologies and production methods, the continuous destruction of the old ones and the continuous creation of new, more effective ones (Caballero et al., 2010). The change projects implemented by companies, which consist of innovations primarily in the area of distribution, intensify the processes of changeability of the environment. This process results in some enterprises that are not able to manage the change project effectively and do not have the ability to survive in the changing environment (Stephen et al., 2012).

In the turbulent environment caused by the COVID-19 epidemic, stores, including retail chains, using multiple distribution channels, including retailers who have so far managed to build integrated systems known as omnichannel, have found a favorable situation. An omnichannel system, as opposed to multichannel (multiple non-integrated sales channels), is characterized by the harmonization of activities regarding the product and how to deliver the shopping experience to the customer regardless of which channel they choose.

In conclusion, it is worth noting that the process of implementing change projects requires that the managers of the enterprise have comprehensive knowledge of the events affecting the volatility of the environment. The process of aging of production methods and product distribution channels is now faster than it was a few dozen or even a few years ago. Moreover, the turbulence of the environment affects the enterprise, requiring decision makers to be able to manage change in order to plan, organize, motivate and control change processes, as well as neutralize emerging threats and take advantage of emerging opportunities. The literature extensively describes the change processes induced by a turbulent environment. However, there is a lack of linkages of
environmental change to the COVID-19 pandemic and in particular to change project management. The problem has been described in the medical sciences, but there is a lack of studies in the management science literature on the impact of the COVID-19 outbreak on corporate change project management processes (Carracedo et al., 2021), especially in relation to change management in product distribution channels.

4. Research methodology

The method of literature analysis and criticism as well as descriptive analysis methods were used to achieve the intended research goal. The method of literature analysis and criticism was used as the first part of scientific cognition. The essence of the method of analysis and criticism of the literature is to indicate the relevance, discoverability and new approach to the indicated purpose of the study. With the use of this research method, the previous scientific achievements in the discussed field are presented, at the same time indicating the existing free research space in the studied area. The method of analyzing and critiquing the literature allowed for the presentation of the complexity and core of the problem described (Coombs et al, 2009). The used research method also allows to indicate the topicality and novelty of the approach to the problem in relation to the current state of knowledge in the studied area. The applied research method made it possible to signal both differences and existing relationships as well as significant features in previous scientific inquiries.

The second method used in the study is descriptive analysis, which came down to a description of the research methodology used in the research conducted (Gibbert et al, 2008). A descriptive function was used as a premise to characterize the methodology used. The descriptive analysis method was used to characterize the sequence of actions, norms and rigors that contributed to the formulation of conclusions.

Analytical research in management science is used to indicate the structure and the relationships contained in it. Therefore, the paper uses descriptive analysis to solve the research problem. The use of the descriptive analysis method to achieve the research objective made it possible to formulate conclusions from the conducted research. The formulation of conclusions was realized on the basis of observation, abstraction and generalization of the observed relationships. This method made it possible to detect both dependencies and gaps in the existing perception of the problem studied.

The research methods used have a limitation related to empirical verification. However, in the case of the undertaken research goal, which is: identification and assessment of the impact of knowledge dynamics processes on the effectiveness of the project implementation of changes in product distribution channels in the conditions of the COVID-19 pandemic, are justified. The premise leading to this conclusion is the fact that, therefore, empirical verification requires time, which is necessary to carry out the observation, measurement, and, consequently, to apply the proposed solutions by the company. Therefore, at a later stage of the research procedure, the case study method used allows for the presentation of a detailed description of the phenomena and relationships under investigation. A significant advantage of the research process being carried out is the pursuit of identification, quantification, and, consequently, the development of the concept of the studied phenomenon and a deeper interpretation (Gibbert et al, 2008).

Problems in management science should be solved using scientific quantitative or qualitative methods. Especially when faced with exploratory and descriptive problems, quantitative methods may not be sufficient to explain their nature, conditions and causes of occurrence or course. In this case, qualitative research methods are used. One of the qualitative research methods used in this article is the case study. In relation to management science, a case study is a detailed description of a real economic phenomenon in order to formulate conclusions about the causes and results of its course. This method is empirical in nature because it analyzes and evaluates phenomena occurring in reality. Case study is used especially for descriptive research topics (Zainal et al, 2007). At the same time, this method uses multiple techniques and tools for data collection and analysis. The article uses the sources of the database of entities to which the examined unit realized the sale of products. On the basis of the collected information, the case study method enabled an in-depth analysis of the studied problem, presenting its specificity, interaction with other elements of its environment.

In addition, for the full implementation of the adopted goal, participant observations were conducted, in which the researcher participated in the implementation of the project which was the subject of observation in the examined enterprise during the research period. The quantitative study was carried out on the basis of data.
from the IT system of the surveyed company. The selection of the sample for the research was purposeful, which was dictated by the purpose of the study.

5. Characteristics of the entity examined

The research results presented in the article are based on a manufacturing company, which is located in Poland and belongs to the medium-sized enterprise sector. The study covered the years 2018 - 2020. During the period under review, the company realised its sales via international distribution channels.

The company's area of operation covers the whole of Poland, as well as to a large extent Lithuania, Latvia, Russia, Hungary, the Czech Republic, Romania and Germany. The company employed approximately 90 people during the years under examination. The enterprise produces a wide range of accessories for window decoration such as curtain rods, blinds, pleats. In 2004 the company obtained ISO 9001:2001 certificate and in 2009 and 2010 it was awarded the Customer Laurel by the votes of consumers. In 2009, the organizational and legal form of the company was changed from a general partnership to a limited partnership, which reflected in the organizational structure the scope of duties performed by separate units.

6. Findings – descriptive analysis

The purpose of the study is to learn and evaluate the impact of knowledge dynamics processes on the effectiveness of the project implementation of changes in product distribution channels under conditions of the COVID-19 pandemic. As a result of the observations, it was noted that in 2018 the company started to develop the e-commerce distribution channel, however in the initial period it did not bring the company the expected results. That is why, the company distinguished in its production and sales structure three production and product distribution channels through which it executed its production and sales processes in the period under review. The basis for separating the production and sales channels was the knowledge of managers, concerning the subjective scope of service logistics of production and distribution of products. The supported distribution channels are divided into the following sectors:

- e-commerce channel (Internet) - serving the individual customer market in Germany,
- network customer channel - serving customers in Poland and Ukraine,
- other clients - serving small and medium-sized enterprises who are clients of the audited entity, both in Poland and abroad.

The e-commerce channel serves individual customers who place orders via e-commerce platforms (eBay, Amazon). It is characterized by a significant fragmentation of both orders, types of products, forms of payment as well as the method of delivering the product to the final customer. As mentioned above, this channel serves customers in Germany.

The network customer channel includes customers with significant order volumes, similar to each other in terms of important product parameters, such as: size, color, type of fabric. Orders received from customers from this channel are characterized by repeatability in the production process and mass sales in terms of logistics.

The remaining customers, to which small and medium-sized enterprises are classified, differ in the volume of sales in relation to individual customers (it is greater than them) while not accounting for the number of network customers that can be served in the channel (too low repeatability of orders). Customers from this distribution channel are located both in Poland and abroad, which additionally affects the logistics processes of deliveries made to customers from this channel. The selection of the research subject was made on the basis of the identified distribution channels for products before the pandemic period. The entity had identified three distribution channels (e-commerce, network customers and others) which made it possible to identify and describe the research goal on the basis of the selected entity.

The scope of realized revenues in the identified distribution channels in the studied company, considering the subject scope of product distribution logistics service and the scope of administrative and office service is shown in Figure 2.
Figure 2: Characteristics of distribution channels in 2018-2020
Source: own elaboration

Figure 2 indicates that the share in sales of e-commerce channel customers located in Germany amounted to 15.86% of total sales, to exceed 32% share in total sales of the entity in 2020. The product distribution channel to network customers, accounted for 50.34% of total sales in 2018. In 2020, it was 46.52%, relying mainly on network customers from Ukraine and Romania. Share of sales to other customers decreased from 33.8% in 2018 to 20.94% in 2020.

7. Conclusions from the research

The presented data shows that increase in knowledge gained from the observations and analyses made has influenced the effectiveness of the project of implementing changes in product distribution channels. The implementation of a change management project in the area of the supported product distribution channels allowed the entity to maintain its sales and production processes in 2020, a year in which significant turbulence in the business environment was observed, compared to the two previous years under review.

Figure 3: Changes in the share of sales by identified distribution channels
Source: own elaboration.
When examining the project of changes in the area of product distribution channels the following conclusions emerge:

- the company has implemented a project to actively seek and develop distribution channels that, despite the enforced lockdown caused by the pandemic in 2020, were able to ensure the sale of products manufactured by the company,
- the entity, within the framework of the implemented project, separated in the management structure the branches (visible especially in the production and sales department) responsible for separated (indicated by the author) and serviced distribution channels, which, due to their specificity, provided the entity with a high level of order fulfillment,
- the company was significantly affected by pandemic-related restrictions, which translated into a significant drop in demand from small and medium-sized customer entities,
- distribution channels have been identified as part of the ongoing change management project; e-commerce, network clients and other entities,
- the entity has observed a change in operating conditions resulting from external circumstances and, by implementing a change management project, has adapted its production, sales and accounting processes to handle, and thus develop, a product distribution channel identified as e-commerce.

The proof of this argumentation is the separation of three channels in the structure of the examined enterprise, i.e. production, distribution and sale of products.

The method of order processing presented in Figure 4 is referred to as traditional or sequential, where individual actions occur one after another, in series, rather than simultaneously. Unfortunately, this type of order handling in the growing e-commerce market, has proven to be ineffective.

![Figure 4: The current phases of the contract](https://example.com/image)

Source: own elaboration.

Until the implementation of the change management project, the company under study was executing the order in its various phases (as indicated in Figure 4). The company has implemented a change management project by, among other things, implementing a dynamic order handling model (Figure 5) in which phases 1 and 2 (indicated by arrows) are implemented in parallel with phase 3, followed by phase 4. In addition, the Company implemented solutions allowing for grouping orders for picking purposes, while maintaining their unit handling (phase 3).

The implication from the research is the concept of change management project implemented based on knowledge, identification, measurement and quantification of product distribution and production channels, allowing to observe the studied phenomena and acquire new knowledge to manage the change resulting from the business environment. This change is the result of external circumstances related to the occurrence of the COVID-19 pandemic. It constitutes a source of knowledge of both threats and opportunities, but the speed of identifying changes is undoubtedly a challenge for the managers of the company under study.
8. Conclusion

The purpose of the study is to find out and evaluate the impact of the project of changing the distribution channels of the products realized sales under the conditions of COVID-19 pandemic. In light of the considerations presented in the study, it can be indicated that the management sciences have observed and described the changes in the environment, pointing to the rationale for emerging threats and opportunities in the company's environment, but not in the conditions of the COVID-19 pandemic, for which there is a research gap.

The analysis of the literature shows that there is a need to make visible the changes in the environment, which, in addition to emerging threats, is also a cause for opportunities, especially with regard to the impact of the COVID-19 pandemic on business management.

The case study was based on a manufacturing company, indicating separate distribution channels both at home and abroad. The research showed that the knowledge gained through observation and analysis has a significant impact on the ongoing project of changing sales in different distribution channels under conditions shaped by the COVID-19 pandemic. It can be assumed that the increase in knowledge effectively affects the management of the project of changing distribution channels during the pandemic period, especially with the e-commerce channel, significantly affects the effectiveness of enterprise management in a turbulent environment.

The presented considerations are important and up-to-date because of the growing role of observing and identifying threats and opportunities in a turbulent environment. Contribution to the management sciences is the project concept of identification and measurement of supported product distribution channels, in order to search for market advantages of the company. One of the important areas of creating competitive advantage, may be the implementation of the project to identify, quantify and subject to a process of verification of the existing product distribution channels which is an expression of effective management of the project of change in the company, caused mainly by external factors.

References


