

ANALYSIS OF THE POTENTIAL FOR INNOVATION THROUGH DIGITIZATION OF MANAGERIAL PROCESSES AT ENTERPRISES IN THE FOOD INDUSTRY OF THE REPUBLIC OF MOLDOVA

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Abstract: *The digitalization of management processes in food industry enterprises of the Republic of Moldova represents a significant opportunity for increasing competitiveness and efficiency in this sector. This in turn is the main sector in the economy of any country, since sustainable food production and supply chain management are always a global challenge that attracts increased interest. This increased interest is a result of the daily increase in demand for food as a result of population growth. As a result, in the food industry, there is a continuous increase in demand for natural resources used in production and throughout the supply system of this industry, as well as increased activity. In addition, in the food industry, concern is daily created regarding environmental sustainability in this sector, thanks to challenges such as food security, health and safety, food waste, fair trade, climate change, etc.*

Therefore, in this article, the author proposes a study conducted on determining the innovation potential of management processes in food industry enterprises of the Republic of Moldova. The goal is to determine the needs for digitizing managerial processes and to provide innovation opportunities through digitization that can lead to the automation of production and inventory management processes, improving product quality and traceability, modernizing and perfecting logistics and marketing, increasing their sustainability, etc.

Keywords: *digitization of managerial processes, innovation, food industry enterprises, innovation potential, etc.*

JEL Classification: *D22, L66, M11, M15, M31, O11, O31, O32, Q55.*

INTRODUCTION

The importance of the food industry can be deduced from the role it has on human life, on their health, the food they consume and have access to. The relationship with the food that is eaten is a personal one, being influenced by family eating habits, traditions and daily social interactions. But what is subject to daily consumption can have an impact on health, society and the environment, and this may not necessarily be positive. The great challenge of the 21st century in the field of the food industry is to provide enough healthy food to an ever-growing global population, but in a sustainable manner.

According to the data of the EAT-Lancet Report (Global nutrition report, 2022), in the context of the COVID-19 pandemic and the period that follows after it, enterprises in the food chain have begun a transformation process in order to continue to be relevant in the future. Which implies that the participants of the food chain, including those from the Republic of Moldova, must adapt to global changes in the food industry, because consumer preferences are increasingly oriented towards an increased demand for healthy products from sustainable sources. The COVID-19 pandemic has demonstrated the importance of health care and a strong immune system. It has also led to consumers' deeper understanding of the relationship between the food they eat, how it was produced, their health and the environment, and calls for food industry businesses to raise standards. These are therefore seen by businesses as opportunities to increase their profitability, research shows that products that are marketed as sustainable achieve sales increases 5.6 times higher than those that are not sustainable (Căprăriu Z., 2021).

So, these new opportunities to increase profitability, to further develop the activities of food industry enterprises also lead to training in innovation management processes, in order to achieve the predetermined objectives.

When talking about managerial or management processes, businesses use several types of managerial processes to ensure efficient operation and the achievement of entrepreneurial objectives. These processes can be classified as follows:

- *Planning processes* - aim at establishing the objectives, strategies and resources needed to achieve them.
- *Organizational processes* - refers to the creation of a clear and efficient organizational structure.
- *Coordination processes* - ensuring total harmony between subdivisions and/or departments of the enterprise.
- *Administration processes* - oriented towards motivating and convincing employees to carry out work that will lead to the achievement of the company's objectives.
- *Processes oriented to control/monitoring*- refer to the evaluation of the performance achieved by the enterprise and the determination and elimination of risks.
- *Decision-making processes* - oriented towards choosing the most optimal solutions with a positive effect on the company's activity.

Effective use of these managerial processes can lead businesses to increase operational efficiency, develop new and competitive strategies, have effective risk management, increased customer satisfaction, and financial performance.

APPLIED METHODS AND MATERIALS

To achieve the proposed objectives, the methodology applied by the author is oriented towards the application of several qualitative scientific methods, such as: the method of comparison, the method of analysis and synthesis, induction and deduction, etc.

Also, data from the statistical data bank of the National Bureau of Statistics were also used, for the identification and practical analysis of innovation potential in enterprises in the food industry of the Republic of Moldova.

RESULTS AND DISCUSSION

The innovation of managerial processes plays an essential role in increasing the competitiveness and adaptability of enterprises to market changes. This involves improving or reinventing the methods, structures and technologies used to manage resources, make decisions and coordinate activities, and this also applies to food industry enterprises.

Therefore, innovation, according to the National Bureau of Statistics of the Republic of Moldova, represents the introduction of a new or significantly improved product, process, organizational method or marketing method into the enterprise. The innovation must have new characteristics or intended uses or provide a significant improvement over what was previously used or sold by the enterprise (BNS, 2024).

Innovation can be:



Figure 1. Types of innovation

Source: (BNS, 2024)

So innovation has a very important role both for the enterprise itself and for the environment in which it operates and develops.

Analyzing the innovation trend of enterprises in the food industry of the Republic of Moldova, we determine the following:

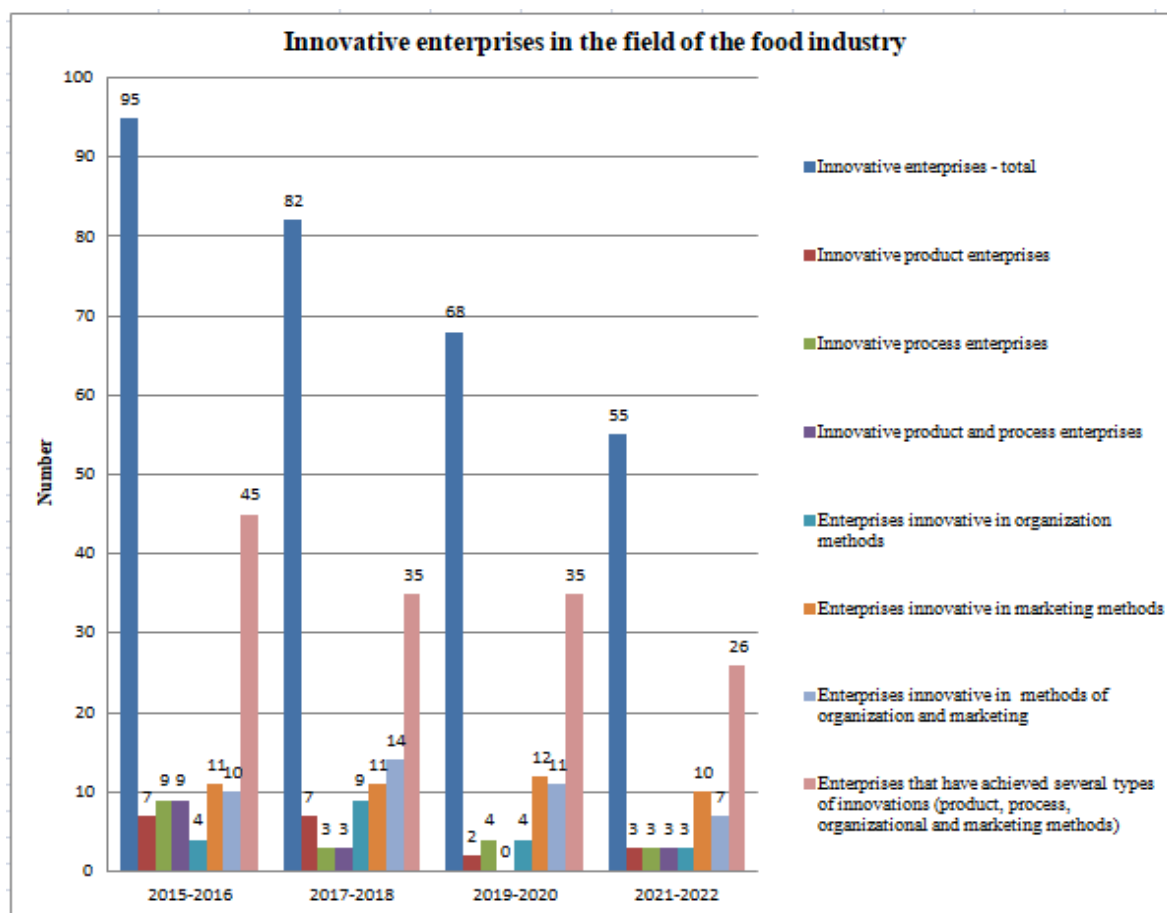


Figure 2. The evolution of innovative enterprises in the field of the food industry of the Republic of Moldova during the period 2015-2022

Source: Made on the basis of NBS data (BNS, 2024)

The data in figure 2 shows that the general innovation trend of food industry enterprises during the period 2015-2022 is a downward one, thus decreased from 95 enterprises in 2015 to 55 innovative enterprises in 2022. This actually represents a decrease of about 42%. However, among the innovative enterprises in the field of the food industry are the enterprises that carry out innovations of several types at the same time (of product, process, methods of organization and marketing), about 50% (between 45-26 enterprises in the analyzed period), but the trend of these enterprises is also decreasing. On the other hand, it can be mentioned that the innovations are mostly oriented towards the methods of organization and marketing (between 21-17 enterprises in each analysis interval), this is mainly due to the digitization trend which is gaining more and more scope and which attracts the attention of entrepreneurs to focus on these possibilities and perspectives in order to increase the turnover of the business, to facilitate the managerial processes and to make the activity more efficient.

A sharp downward trend is registered on innovative enterprises in the field of the food industry, on its products and processes, both individually and associated. If in the years 2015-2016 they deviated between 7-9 enterprises, in the years 2021-2022, they reached the threshold of 3 enterprises. This speaks of the decreasing interest of economic agents in the field of the food industry to apply innovations to new productions or processes due to the fact that this is becoming more and more difficult to achieve, either because of increased costs and difficult to recover, or because it is becoming more and more difficult to amaze the consumer, who mostly has access to a market that is already quite saturated. At the current stage, food industry entrepreneurs must be aware of all consumer trends and expectations of various nature: necessity, health, culture, traditions, snobbery, etc.

Next, the author proposes for analysis the general evolution of the number of innovative enterprises in the Republic of Moldova during the years 2015-2022, to serve as a comparison with the innovative enterprises in the food industry.

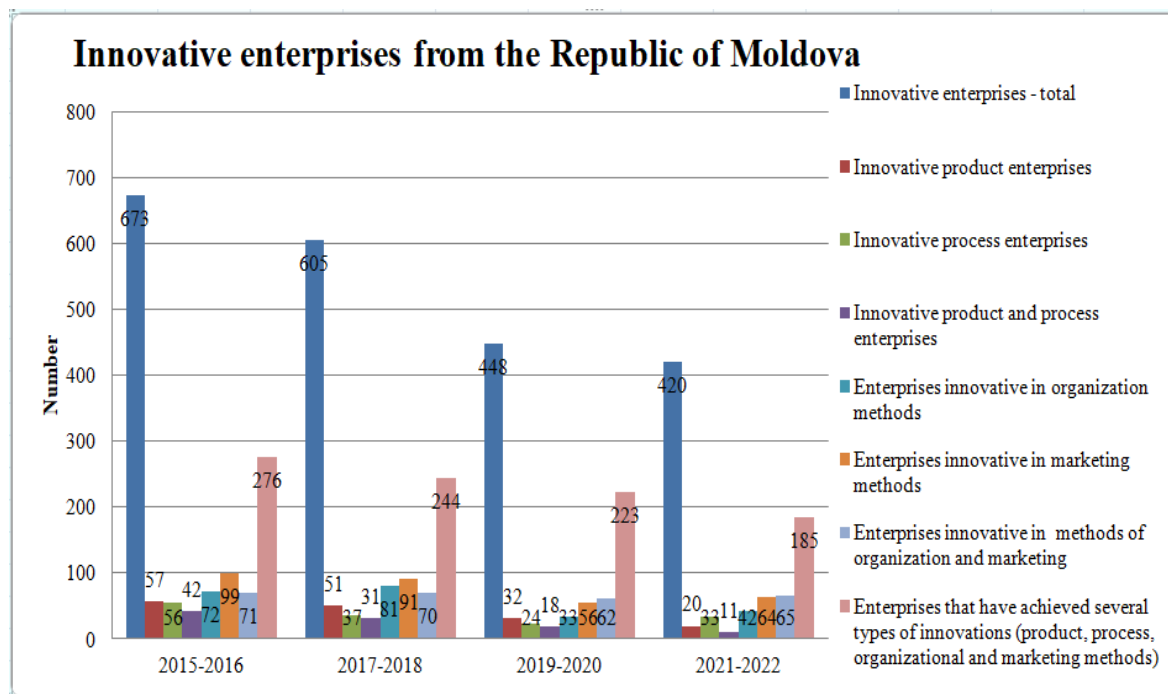


Figure 3. The evolution of innovative enterprises in the Republic of Moldova during the years 2015-2022

Source: Made on the basis of NBS data (BNS, 2024)

The analysis of the data in figure 3 shows that the trend of innovative enterprises in the Republic of Moldova is a decreasing one, as well as that of the food industry. This trend is registered both in general and for each type of innovation. At the same time, we point out that there is an increased preponderance of companies that carry out innovations of several types at the same time (product, process, organizational and marketing methods). These constitute approximately 41%-44% annually, or between 276-185 enterprises during the analyzed period. Another trend comparatively equivalent to the food industry is marketing innovation, this speaks of the trend of businesses in the Republic of Moldova that increasingly access digital tools to bring more efficiency and record performance to their businesses.

Next, the comparative analysis of the weight held by the food industry in the total number of innovative enterprises in the Republic of Moldova in the period 2015-2022 will be presented.

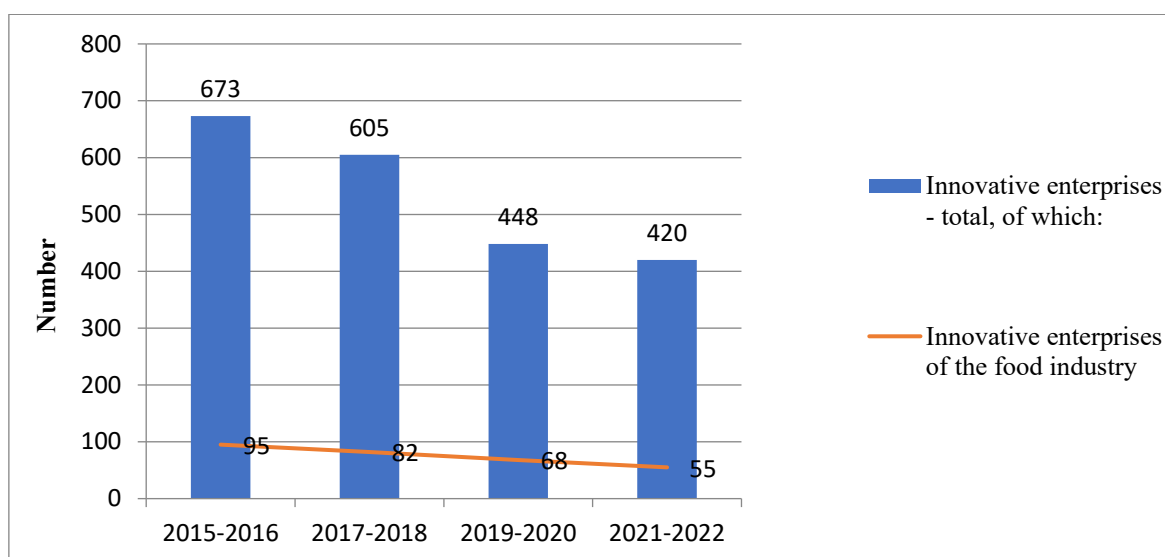


Figure 4. The comparative evolution between totally innovative enterprises and innovative enterprises in the field of the food industry in the Republic of Moldova during the years 2015-2022

Source: Made on the basis of NBS data (BNS, 2024)

The data in figure 4 indicate that the share held by innovative food industry enterprises in total innovative enterprises is about 13%-14% (about 95-55 food industry enterprises out of the total of 673-420 evolutionary enterprises during the years 2015-2022). This speaks of an equivalent trend of innovation in food industry enterprises vis-à-vis the other fields and vis-à-vis the phenomenon in general.

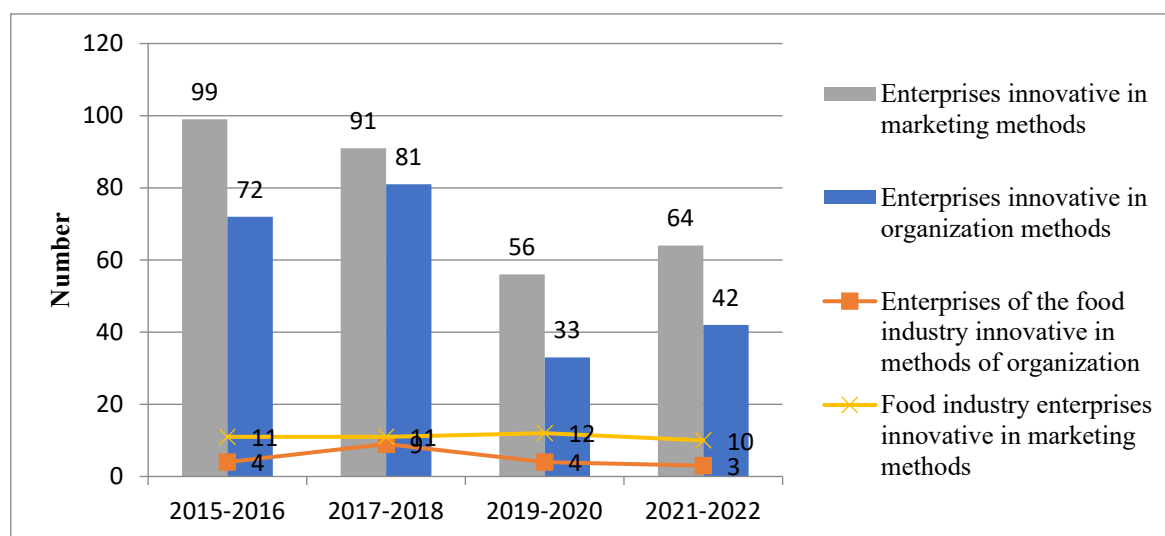


Figure 5. The comparative evolution of innovative enterprises in the field of the food industry and total innovative enterprises in the Republic of Moldova according to marketing methods and organizational methods, for the period of 2015-2022

Source: Made on the basis of NBS data (BNS, 2024)

Under the aspect of innovation of organizational methods, we can mention that from one management period to another, the preponderance varies. Thus, if in the period 2015-2016 only 6% (4 enterprises) of the total belonged to enterprises in the field of the food industry, in the period 2017-2020, they held a share of about 11-12% (9-4 enterprises) of the innovative enterprises oriented on

organizational processes, and towards the years 2021-2022 this share drops again to 7% (3 enterprises).

At the same time, the innovation of marketing methods is more preferred by enterprises, including those of the food industry, so that in the years 2015-2018, approx. 11%-12% (11 enterprises) of innovative food industry enterprises were based on marketing innovation, in the years 2019-2020, approx. 21% (12 enterprises) and in the period of the years 2021-2022, approx. 16% (10 enterprises). Which means that during the pandemic years, when many enterprises were in stagnation and even reached bankruptcy and liquidation, food industry enterprises tried their best to develop their activity, focusing on innovation.

Systematizing the data presented above, we mention that the enterprises of the food industry in the Republic of Moldova practice innovation in their activity, but not enough. This could be made more efficient and easier by including digitization.

CONCLUSIONS

The innovation achieved through the digitization of managerial processes would constitute the indispensable, safe and essential tool for increasing the efficiency, competitiveness and adaptability of enterprises in the field of the food industry, in the current digital economy. This involves the use of digital technologies to automate and optimize planning, organizing, coordinating and controlling processes. Therefore, it could bring a number of advantages, such as:

- Increasing operational efficiency - by automating current operations, reducing time and effort for their registration and control.
- Increasing accessibility in real time - the existence of data analysis platforms (Big Data) lead to continuous monitoring of performance and rapid determination of risks.
- Streamlining internal and external communication - by using digital platforms facilitating real-time collaboration and sharing.
- Flexibility and adaptability- cloud solutions provide access to data and applications anywhere and anytime, ensuring flexibility in business management.
- Cost reduction - the automation of processes can lead to the minimization of the need for manual intervention, reducing personnel expenses to the maximum. Integrated software solutions also eliminate redundancies and optimize resource management.

Thus, the effect of digitization on managerial processes could take the form of: faster and better informed decisions through the use of advanced data analysis; continuous innovation by including state-of-the-art technological solutions; effective global competition in international markets and last but not least, increased employee satisfaction thanks to the automation of repetitive tasks, allowing focus on creative activities.

Innovation through digitization of managerial processes in food industry enterprises can constitute an essential strategic investment for modernization, contributing to increasing efficiency, flexibility and competitiveness. Through the implementation of advanced technological solutions, it tends to modernize and innovate the way of managing resources, making decisions and responding to the needs of the market

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