

IMPLEMENTATION OF THE INNOVATIVE MANAGEMENT IN THE FOOD INDUSTRY ENTERPRISES IN THE REPUBLIC OF MOLDOVA - CURRENT STATE, BARRIERS, POSSIBLE SOLUTIONS

Veronica PRISACARU¹, Olga STRAINU²

¹Moldova State University, 60 Alexei Mateevici Street., MD-2009, Chisinau, Republic of Moldova, Email:veronica.prisacaru@usm.md

²Technical University of Moldova, 168 Ștefancel Mare și Sfânt Boulevard, MD-2004, Chișinău, Republic of Moldova, Email:olea.strainu@gmail.com

Corresponding author: veronica.prisacaru@usm.md

Abstract

The basic goals of the research consisted in the elucidation of the essence and significance of the innovative management, its connection with the enterprises' performance, as well as the reflection on the implementation of innovative management in the food production sector of the Republic of Moldova. The research was carried out with the use of qualitative and quantitative methods: literature review, interview, content analysis, thematic and statistical analysis. As a result of the research, problems related to the economic efficiency of the food enterprises, as well as related to the reduced tendencies of the exports of the food products have been identified. It was also found out that the number of innovative food enterprises is continuously decreasing. Thus, even if more and more enterprises are advocating for the combination of different types of innovations (a fact positively appreciated), the reduction in the number of innovative enterprises induces the reasoning that the sector does not sufficiently capitalize on innovation as a performance factor. According to the opinion of the company representatives, the financial barriers have the greatest negative impact on the innovative activity of food enterprises, followed by the barriers related to the reduced demand for innovative products, the insufficiently capitalized human factor, deficiencies in creating partnerships, insufficient information etc. In these conditions, the amplification of efforts to promote and support innovations is required as an important direction for improving the management of food enterprises.

Key words: efficiency, food production, innovative management, Republic of Moldova

INTRODUCTION

The particularly flexible environment in which businesses are developing at the current stage imposes the need for innovative management as an indispensable factor of the success and sustainability. Thus, starting from highlighting it as the specific tool of entrepreneurs, as the means by which they exploit change as an opportunity for another business or a different service [6] we can state that the synergy of innovation and management is the cornerstone of the performance. In order to argue the last reasoning, we can refer to Van de Ven who emphasizes new ideas and ways to improve capabilities and the development of new products or processes as remedies against stagnation [20]. Kline and Rosenberg, in their turn, point out the role of innovation in the economic growth [9].

Countless attempts to conceptualize innovative management having been stated, we distinguish the scope of innovation as a criterion for highlighting its internal side, according to which technological and managerial innovations are highlighted. Thus, the concept of innovative management involves both focusing on the design and implementation of technological innovations, as well as the accomplishment of managerial duties at a new qualitative level, in an innovative manner.

The technological side of the innovation presupposes directing the idea and the new to a new product, process or service [7]. The role of the technological aspect of innovative management can be seen in the approaches of Van de Ven [20] and Nagiț [13], it later being developed by including the resources used to obtain new products. Thus, according to Nagiț' opinion, all potential and all

resources, be they material or human, must be used to acquire new knowledge which, once accumulated, leads to the generation of ideas that allow obtaining new products, processes and services or improving existing ones and the transfer of the best ideas to the manufacturing and commercialization phases [13]. According to Cormican et al., product innovation is the strongest pillar used by the enterprise to achieve success [2].

Separate reflections on managerial innovation can be found at authors such as Evan, Daft, Damanpor et al., Hamel. Evan, for example, referring to technological and managerial innovation (using the term administrative innovation), mentions that compared to technological innovation, new ideas in administrative innovation can be extended to wider areas, such as staff recruitment, resource allocation, structuring tasks, developing authority or reward system [7]. Daft uses the term "organizational innovation" meaning the adoption of a new idea or a new management method by a company. The author supports Evan's ideas, stating that the part of organizational innovation, which refers to the personnel and the manager's activity, must be studied differently from the technological innovation. Moreover, he highlights the important role of the manager in the development of new ideas, but especially in their implementation [3].

Damanpour et al. state that the importance of innovative management lies in its ability to make the organization work and to succeed by using its resources in an efficient way. And for this goal to be achieved, it is necessary to have managerial knowledge and skills that, once possessed, contribute to making changes in the organization's structure and processes [4].

Hamel positions innovative management focused on the organizational side as clearly superior in its importance in comparison with innovative management focused on the product. Thus, in his work "The Future of Management" the author identifies the following forms of innovation: operational innovation, product innovation, strategic innovation and management innovation. Studying the importance and impact of each

type of innovation and accepting that each of them has an important role in achieving a certain level of efficiency, the author claims that management innovation must be ranked first, stating that understanding this fact is an important step in consolidating innovative practices in managerial activity [8].

By summarizing the presented above, we support the complex approach to the innovative management, by including both technological and managerial elements and, in this context, we consider it relevant to define it as the totality of new processes and practices, implemented starting with the managerial dimension up to the technological one, which aim to change the way in which the company operates by introducing new techniques and strategies, the expected result being the increase in the economic performance.

Being widely recognized the impact of the innovation on the enterprises' performance [1;11;12;21], we will especially highlight its role in improving the efficiency indicators of the activities carried out. Thus, by stimulating the entrepreneurial spirit, innovation contributes to increasing the business performance, through its role in reducing the losses, increasing the work productivity, better managing the available resources [19].

MATERIALS AND METHODS

The research methodology consisted of:

- synthesis of conceptual approaches to innovative management, of its internal side, as well as of its connection with business performance;
- analysis of the food production sector performance in the Republic of Moldova;
- performing a general incursion on the innovative activity of food industry enterprises;
- diagnosing the innovation barriers in the food industry;
- arguing the influence of innovative activity on the performance of food enterprises;
- formulating the recommendations for rationalizing the innovative activity in the food production sector.

Research tools included: literature review, content analysis, thematic and statistical analysis, structured thematic interview carried out on a sample of 78 managers and specialists of the food enterprises between February and April 2022.

In order to achieve the research objectives, the following sources of information were used: a series of scientific publications with reference to the researched subject, statistical data related to the economic performance of food industry enterprises, as well as the data obtained by the National Bureau of Statistics of the Republic of Moldova as a result of the application of the statistical questionnaire 1 - INOV "Innovation in industry and services", the results obtained in the structured thematic interview of the food enterprises' representatives.

RESULTS AND DISCUSSIONS

Even if the exact quantification of the impact of the innovation on the performance indicators is a difficult, or even impossible task, the existence of causal relationships between the performance indicators and the innovative activities carried out is indisputable, this fact being reflected above. In order to support this reasoning, we will further evaluate the economic-financial situation of the food enterprises in the Republic of Moldova in relation to their concerns for various types of innovations.

According to the official data of the National Bureau of Statistics of the Republic of Moldova, in 2021 the food industry was represented by 977 enterprises. At the same time, by examining the trends in the number of food enterprises, the continuous increase is noted, the growth rate in 2021 compared to 2015 being 104.82% [15].

A significant aspect in the enterprises' activity is the obtained economic-financial indicators. Among them, we will initially highlight the value of the production obtained, its evolution being shown in Fig. 1. According to the data in Fig. 1, during the analyzed period, a stable but slow trend is observed in the increase of the production value obtained by food industry enterprises.

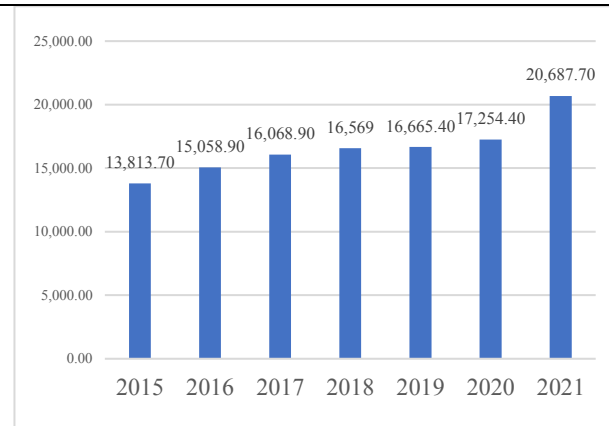


Fig. 1. Evolution of the production obtained by food industry enterprises in the period 2015-2021 (million lei)

Source: Developed by the authors based on [14].

The prosperity of each sector can be evaluated, however, by the efficiency of the activities carried out. The ability to operate profitably is an essential factor in the sustainability of each sector. By investigating the financial situation of food industry enterprises, we find out, however, the existence of an imposing number of inefficient entities (Fig.2).

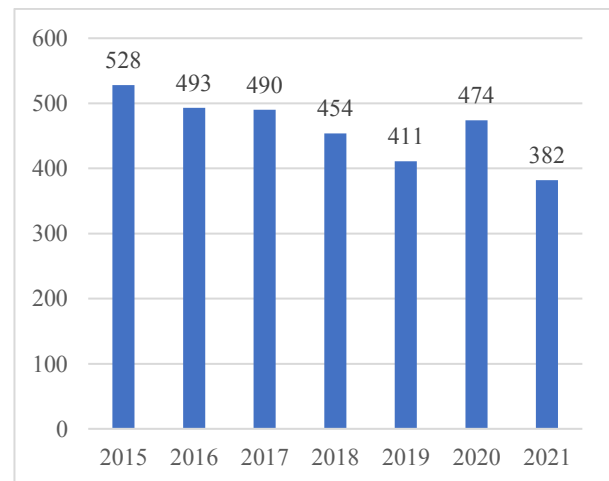


Fig. 2. Evolution of the number of enterprises of the food industry that operated with losses in the period 2015-2021 (units).

Source: Developed by the authors based on [15].

From the data in Fig.2, we infer an alarming situation resulting from the number of enterprises that operated with losses during the analyzed period. Also, a high share of inefficient enterprises in the total number of enterprises is found out (Fig. 3).

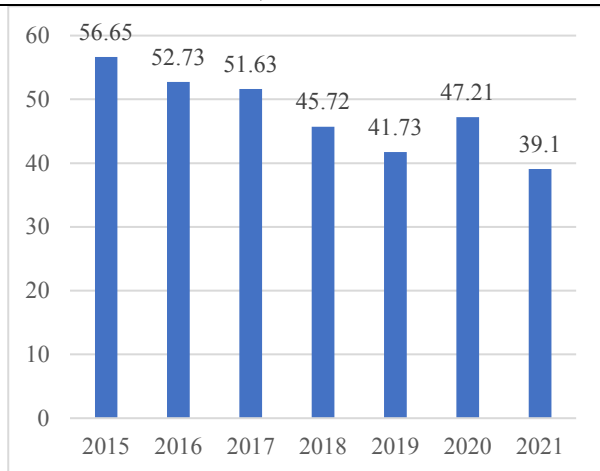


Fig. 3. The share of enterprises that operated with losses in the total number of enterprises of the food industry in the period 2015-2021 (%)

Source: Developed by the authors based on [15].

From the data in Fig. 3, it follows that, even if in the analysed period there is a slow reduction

in the share of inefficient enterprises in the food industry, 39.1% of them continue to face losses. Another important productive aspect of the food sector is its contribution to the country's exports. The data in Fig. 4 reveals the dynamics of exports of food industry products in the period 2015-2021 and shows the following: even if the value of exported food products is increasing, the growth trends are extremely slow. Thus, for example, the rate of increase in the value of exported food products in 2021 compared to the previous year was only 107%, and compared to 2015 – 136%.

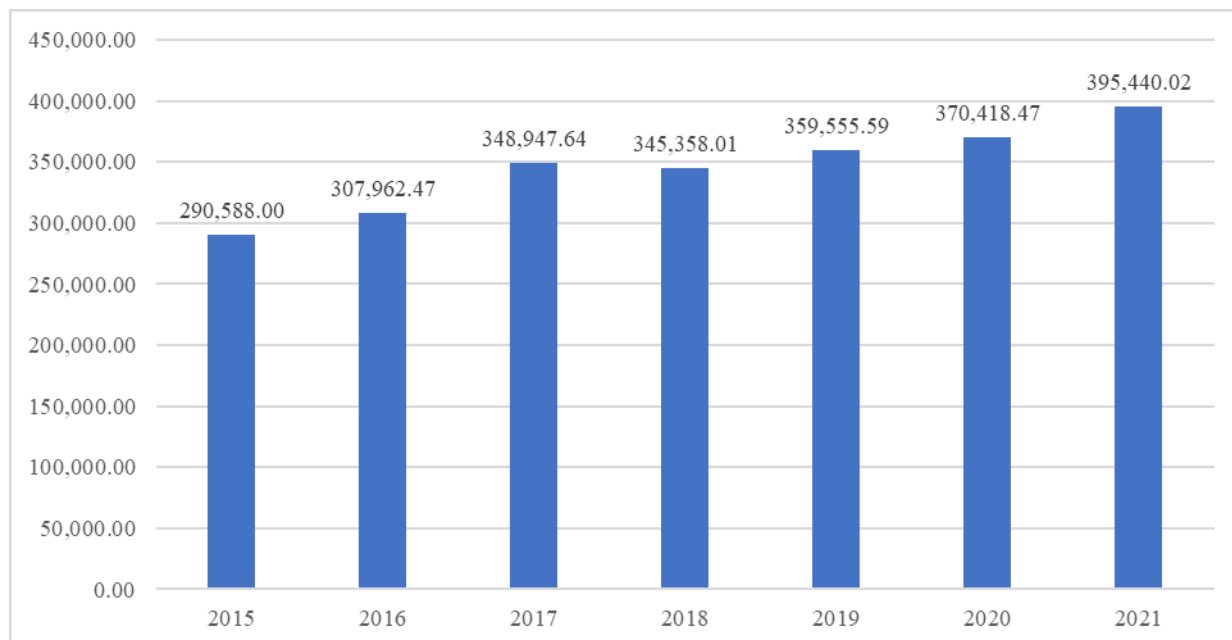


Fig. 4. Dynamics of exports of food industry products in the period 2015-2021 (thousand US \$)

Source: Developed by the authors based on [16].

The problems highlighted above with reference to the reduced economic efficiency of the food sector enterprises and the slow trend in increasing the value of the exported food products induce the reasoning of the ineffective management of the factors generating performance, one of which, as previously mentioned, is the innovative management. In this context, we return to the hypothesis that innovative management, by its essence, combines technological and managerial innovation, the effects on the organization's performance representing a

cumulative product of both components. In this context, we specify that the statistical questionnaire 1 - INOV "Innovation in industry and services" allows to estimate the efforts of companies on 4 types of innovation: product innovation, process innovation, organizational innovation and marketing innovation. Thus, the technological aspect is found in product innovation and process innovation, while the managerial side is reflected in organizational and marketing innovation (Fig.5).

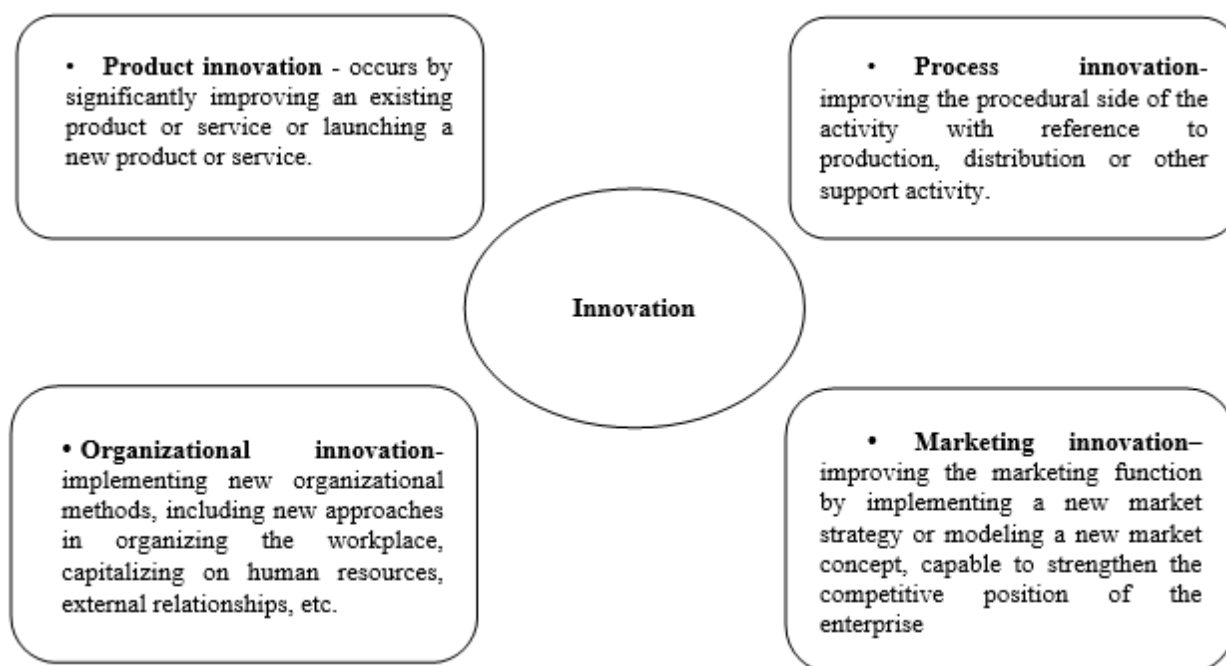


Fig. 5. Types of innovation included in the statistical questionnaire 1 - INOV "Innovation in industry and services"
 Source: Developed by the authors based on [17].

Table 1. The dynamics of the innovative enterprises in the food industry of the Republic of Moldova in the period 2015-2020

Indicators	Years		
	2015-2016	2017-2018	2019-2020
The number of innovative enterprises in industry and services, un.	673	605	448
<i>including in the food industry, un.</i>	95	82	68
The share of the innovative enterprises in the food industry,%	31.25	27.89	23.45
The share of the innovative food enterprises in the total number of innovative enterprises in industry and services, %	14.12	13.55	15.18

Source: Developed by the authors based on [18].

Note: The statistical questionnaire 1 - INOV "Innovation in industry and services" was applied only to enterprises with 10 or more employees.

Official statistical data on innovation in industry and services allow to assess the situation related to the food industry enterprises, along with other analyzed industries. Thus, in Table 1, the dynamics of the number of innovative enterprises in the food industry in the Republic of Moldova in the period 2015-2020 is presented.

The data presented in Table 1 denotes continuous reducing trends in the dynamics of the total number of innovative enterprises in industry and services. A similar trend is also noted in the dynamics of the innovative food enterprises. The share of the innovative enterprises in the food industry is also decreasing. A better situation is found in the share of innovative enterprises in the food industry in relation to the total number of

enterprises in the industry and services, being noticed a growth trend. The last finding does not diminish, however, the significance of the problem of reducing the number of innovative enterprises in the food industry and denotes the need for more effective measures aimed at improving the innovative activity in that sector.

With reference to the types of innovations advocated by food enterprises in the Republic of Moldova, we deduce the following: according to the data in figures 6-8, most enterprises apply simultaneously all types of innovation. Thus, in the period 2015-2016 the share of food enterprises with mixed innovations was 47.37%, in the period 2017-2018 - 42.68%, and in the period 2019-2020 - 51.47%. On the second position are ranked

innovative enterprises based on marketing methods and companies that combine innovation based on organizational and marketing methods, the distinct weight of each category varying insubstantially in the examined period.

Thus, if the reducing tendency in the number of innovative food enterprises diminishes the development capacity of the sector, we can positively appreciate the concern of the majority of food enterprises for all types of innovation.

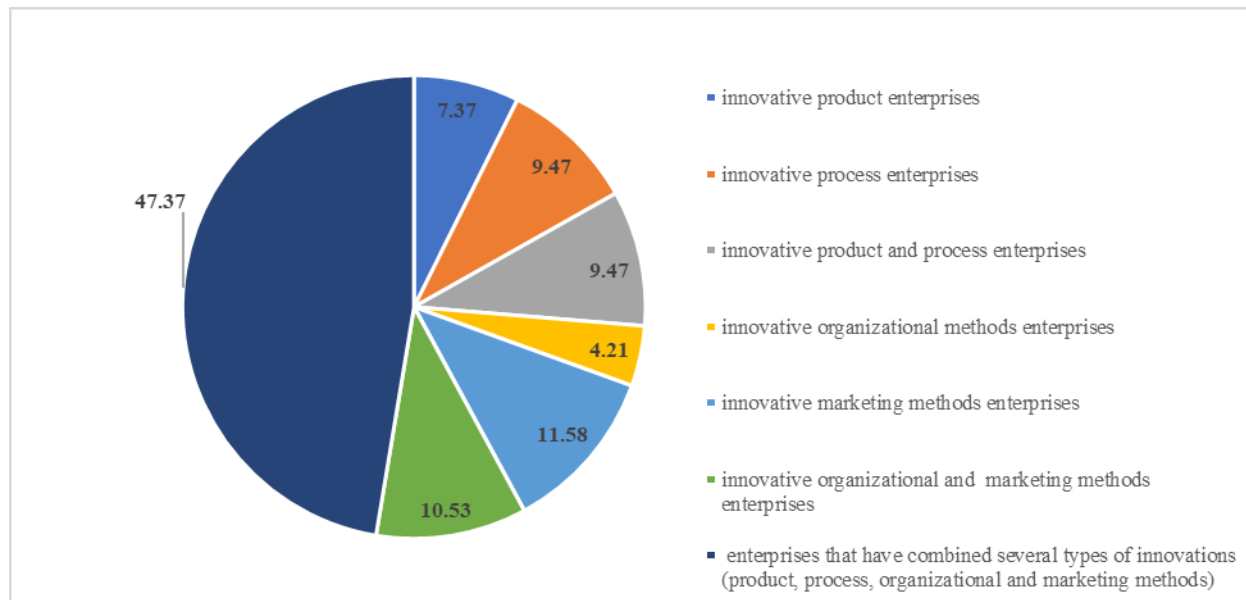


Fig. 6. The types and combinations of innovations applied by food enterprises in the Republic of Moldova in the period 2015-2016 (%)

Source: Developed by the authors based on [18].

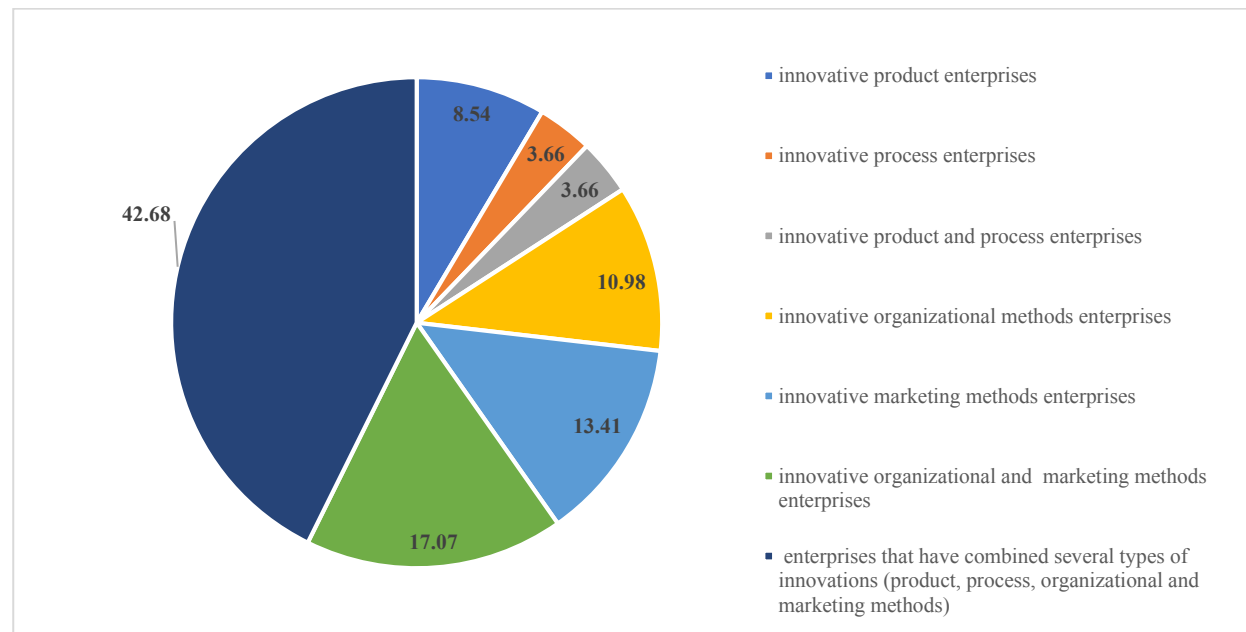


Fig. 7. The types and combinations of innovations applied by food enterprises in the Republic of Moldova in the period 2017-2018 (%)

Source: Developed by the authors based on [18].

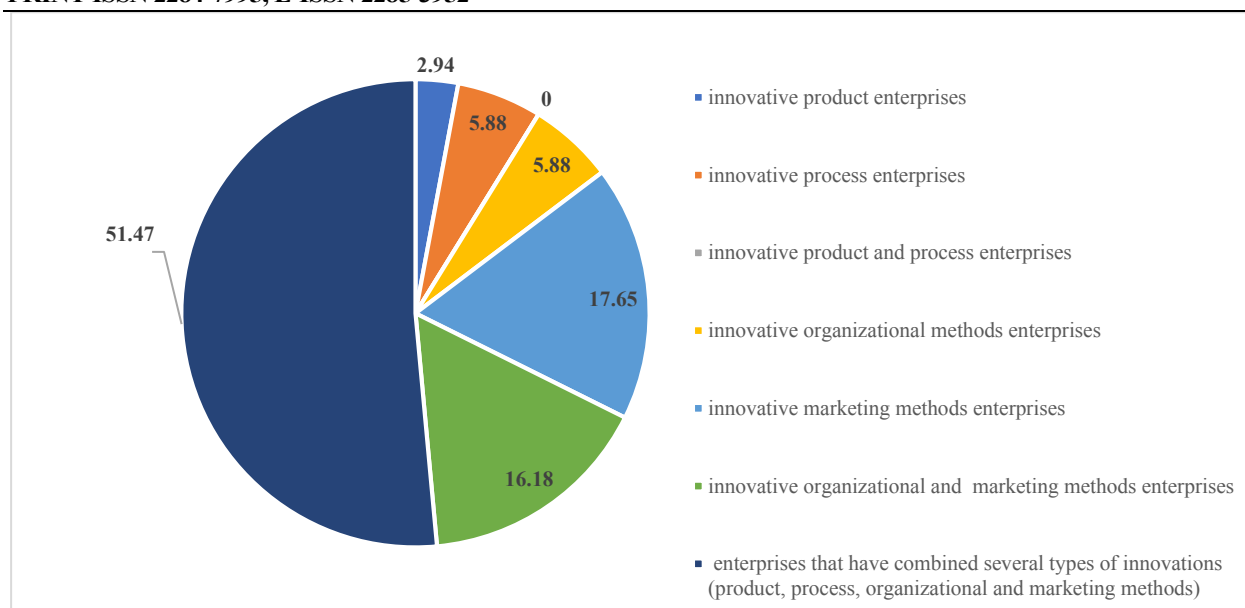


Fig. 8. The types and combinations of innovations applied by food enterprises in the Republic of Moldova in the period 2019-2020 (%)

Source: Developed by the authors based on [18].

Along with those reflected above, we note the following: admitting that enterprises that apply several types of innovation optimally combine various directions, among those that advocate for one type or a combination of two types, the enterprises that focus primarily on the managerial type of innovation predominate (Table 2).

Table 2. The share of innovative enterprises in the food sector of the Republic of Moldova that advocate for the technological or managerial side of innovation, %

The innovation type	2015-2016	2017-2018	2019-2020
Technological	26.31	15.86	8.82
Managerial	26.32	41.4	39.71

Source: Own calculation.

By examining the data in Table 2, we find out that during the analyzed period, food enterprises are increasingly advocating for managerial innovations, which corresponds to the particularities of the current business development stage that requires increasingly ingenious and effective managerial approaches. At the same time, the drastic reduction of enterprises operating with technological innovations is negatively appreciated. In the existing context of the food market, technological innovations have a major significance and determine not only the production quality and efficiency, but also the

ability of the sector to increase exports. Taking into account the slow rate of growth of food product exports, we deduce that focusing the efforts of food companies on technological innovations would contribute to increasing the competitiveness of the respective products on the foreign market.

The trends that emerged in the implementation of innovations by food companies from the Republic of Moldova denote the presence of some barriers, the identification of which is considered „...essential to understanding firms' innovation processes overcoming these barriers” [5]. The innovation barriers, in turn, are defined as „internal or external factors to a firm that decrease or even prevent the firm's propensity to innovate, reduce its ability to introduce and sustain a new or significantly improved product or process, affect innovative activity, prevent the achievement of expected results and impact business performance [10].

In order to diagnose the barriers to the innovative activity in the food industry, a structured thematic interview on a sample of 78 managers and specialists was applied. The questions formulated in the interview were pursuing the objective of evaluating the innovation obstacles and the extent to which

they affect the performance of the enterprise, according to the respondents' opinion. By analyzing the results of the interview, the following were found out: most of the respondents indicated financial barriers as having a major negative impact on the innovative activity of enterprises: deficiencies in attracting external resources, insufficient own resources, high costs of innovations.

Next comes the reduced or uncertain demand for innovative products, followed by issues related to the quality and motivation of human resources. It should also be noted the difficulties in creating partnerships for innovation, as well as the insufficiency of information about different novelties (Table 3).

Table 3. Results of interviewing managers and specialists of food enterprises regarding barriers to innovative activity (Total score)

Barriers to innovative activity	Total score given by the respondents
Deficiencies in attracting external resources (loans, grants, subsidies, etc.)	351
Insufficiency of own financial resources	348
High costs of innovations (it costs a lot to introduce something new)	329
Low or uncertain (unclear) market demand for innovative products	275
Insufficiency of qualified personnel, able to develop and introduce innovations	267
Insufficient motivation of the company's staff for innovative activity	231
Difficulties in creating partnerships for innovative activities (with other similar companies, research institutions, etc.)	189
Insufficiency of information about various novelties in the related field	135
Others	56

Source: Own calculation.

Along with the barriers named above, the following were mentioned in the "other" category: fear of risk; financial instability in the country and, as a result, rising rates on bank loans; the instability of foreign trade policies; psychological barriers (fear of change), etc. Being asked for their opinion on the share of influence of each group of barriers on the innovation performance of entities, the

respondents stated that financial barriers reduce innovation performance by about 45%; 19% of the total reduction in the innovation performance is due to market barriers; 16% of the decrease in innovation performance is determined by the inadequate quality and motivation of human resources. The other barriers examined cumulatively exert a negative influence of 20% (Fig. 9).

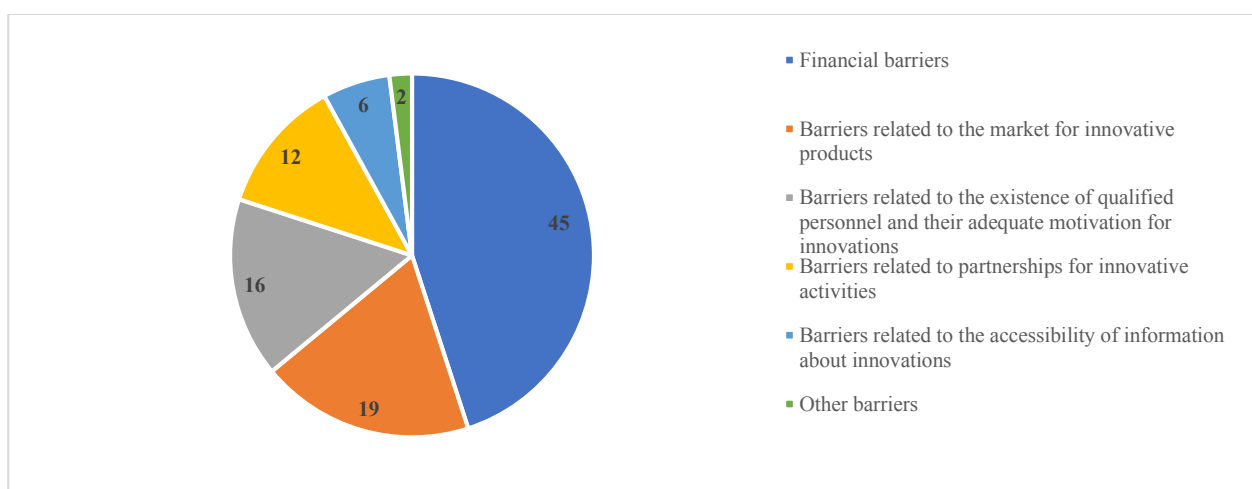


Fig. 9. The quantification of the influence of different groups of innovation barriers on the innovation performance of entities in the food industry (%)

Source: Own calculation.

CONCLUSIONS

By generalizing the presented above, we deduce the following: the increase in the number of food enterprises combining different types of innovations denotes their awareness of the complex nature of innovative approaches. At the same time, the reduction in the number of innovative food enterprises indicates major deficiencies of the innovative management in the sector. Likewise, the reduction of the share of food enterprises that operate with technological innovations diminishes the efficiency of the sector and the competitiveness of the respective products on the foreign market.

Having proven the significance of innovation in increasing the business performance, we can say that innovative management as a performance factor is insufficiently valued in the enterprises of the food industry in the Republic of Moldova.

According to the opinion of the company representatives, the financial barriers have the greatest negative impact on the innovative activity of food enterprises, followed by the barriers related to the reduced demand for innovative products, the insufficiently capitalized human factor, deficiencies in creating partnerships, insufficient information etc. In these conditions, the amplification of efforts to promote and support innovations is required as an important direction for improving the management of the food enterprises. In this context, the need for the following actions can be deduced:

-for all actors of the innovation ecosystem - the wider dissemination of information about technological innovations, the opportunities to finance innovations, as well as the experience of companies with high results in the implementation of innovations;

-for representatives of state bodies - improving state policies in supporting innovative activity; supporting and promoting partnerships in innovation;

-for the National Agency for Research and Development – highlighting, as an important priority in research in the State Program 2024-2027 - the development of partnerships between research institutions and the business

environment in order to strengthen innovative activity as a pillar of the sustainable development.

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