

Competition in Moldova's Food Market: A Comparative Study of SMEs Management Systems

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Abstract

A dynamic competition in a free market comprises its own mechanisms for balancing the supply and demand of goods and services. The paper proposes an analysis of companies in the agri-food sector in Moldova, focusing on their turnover and geographical distribution by regions. Open-access articles from Clarivate, Google Scholar, and ResearchGate were used for the literature review. Official data provided by National Bureau of Statistics were utilized for the research. The results showed a significant increase in cumulative turnover for operators in the food industry during 2015-2021. In 2022, regarding the concentration level of companies across different geographic regions, the highest concentration was observed in Chisinau Municipality and the lowest in the ATU Gagauzia. The study highlighted an Inverse Herfindahl-Hirschman Index in Chisinau Municipality and a minimum the ATU Gagauzia Region. The analysis conducted is part of the doctoral training stage.

Keywords: SMEs, food chain, Republic of Moldova, competition, concentration

JEL classification: M16, L11, L16

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1. Introduction

The agri-food sector in the Republic of Moldova has registered an upward trend in recent years, in the context of the liberalization of food exports to the European Union, boosted by the free trade agreement concluded in the year 2014 (Zanet and Stanciu, 2020).

The Association Agreement between the Republic of Moldova and the European Union and the European Atomic Energy Community from 2014, which was ratified by the Parliament of the Republic of Moldova, by Law no. 112 of July 2, 2014, stipulated the assumption of responsibilities for creating the conditions for a free-market economy and sustainable development.

Following the signing of the Association Agreement (2014), specific legislative regulations were implemented: Law no. 183 of July 11, 2012, on Competition, Law no. 139 of June 15, 2012, on State Aid, Law no. 166 of July 11, 2012, for the approval of the "Moldova 2020" National Development Strategy, and

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the strategy of the National Program on Competition and State Aid for 2015-2020 was drafted (Competition.md, 2020).

One way to increase profit can be the development of production volume, to satisfy the public demand for goods and services. The development of competition at this stage is gaining momentum and is influenced by the: number of economic agents; technological-economic power of growth and development; market demand and supply; type of diversification of offers; degree of differentiation of preferences; market transparency; normative regulations for market entry and exit; economic regulation policy; barriers to actors' market entry, etc. (Munteanu Pila and Stanciu, 2019).

Introducing digital technologies such as blockchain and artificial intelligence (AI) in the agri-food sector of the Republic of Moldova can revolutionize the management of supply chains. The use of blockchain would ensure complete traceability of products from farm to consumer, thus increasing transparency and trust in product quality. In the Republic of Moldova, there is no direct strategy for the digitization of the agricultural sector, but there are initiatives within the National Strategy for the Development of the Information Society, called 'Digital Moldova 2020.' Agro-Grup SRL has introduced blockchain technology for the traceability of agricultural products (Amarfii-Railean, 2022).

2. Materials and methods

For the bibliographic documentation, free access articles from the Clarivate Analytics, Google Scholar, and ResearchGate databases were used, through the institutional website. About the legislative issues specific to the food sector, the legislative aspects in the field of competition from the Republic of Moldova and Romania, the official Communiqués of the European Commission and the European Parliament, the Decisions of the Government of Romania, of the relevant ministries of the two countries, the National Authorities for Consumer Protection, the decisions of other European or national institutions were accessed. As for the assessment of the evolution of traditional and modern types of retail, public information was retrieved from the databases of the National Institute of Statistics, the National Bureau of Statistics (NBS), and Eurostat. The collected data were processed statistically, using tabular calculation methods and the indicators of concentration of the economic market by region.

The results were graphically represented, interpreted, and compared with other information from specialized publications, for validation.

3. Results

The competitive phenomenon depends on several factors which can directly and/or indirectly influence the competition: the technical-economic structure of the market, the characteristics of the product (original, differentiable, etc.), the demand for the product/service (the ability to show elasticity/flexibility in relation to the selling price, etc.). For the sector to be competitive, it is necessary to define certain real market boundaries with an economic growth effect (Mocanu et al, 2024).

The main tool for market regulation is the study or research of the relevant market in the sector facing problems or with a major risk index, which aims to establish the framework within which the competition between enterprises manifests itself or is affected (Barkema, 1991). The need to regulate the competitive activity has evolved over time, manifesting itself directly and indirectly in the development of a country's economy.

The 1994 Constitution of the Republic of Moldova, in art. 126, similarly stipulates that the market economy in the Republic of Moldova is engaged in free economic competition, and the same article contains the obligation of the state, through policies, to regulate economic activity by issuing normative acts to protect fair competition (The 1994 Constitution of the Republic of Moldova).

By analyzing the competition policy of the Republic of Moldova, four key stages of evolution can be distinguished, each one being closely correlated with the historical stages of the national economy (Guțu, 2021):

- Demonopolization and the creation of the competitive mechanism of the market economy (1992-2000): characterized by the transition from a centrally planned economic system to a market economy. The focus was on dismantling the existing monopolistic structures and creating a framework for free and fair competition. The efforts included price liberalization, the privatization of state-owned enterprises and the creation of a legislative framework that would allow the emergence of healthy competition.

- Creating the competition protection system on the domestic market (2000-2012), in which the emphasis was placed on strengthening the legal and institutional framework for the competition protection. Laws and regulations, aimed at preventing and punishing anti-competitive practices, as well as protecting consumers and small and medium-sized enterprises from the negative effects of economic concentrations and monopolies, were introduced.

- The development of a complex competition policy according to a European model (2012-2017). During this period, the Republic of Moldova began to align its competition policy more closely with the standards and practices of the European Union, with an increased emphasis on the compliance with the European rules and regulations in the field of competition, with the aim of improving the business climate and stimulating foreign investments.

- The integration of competition policy with other economic policies of the state (2017-present): the current stage, underlying the effort to interconnect the competition policy with other areas of economic policy, such as industrial, innovation and trade policy. The goal is to create a holistic economic environment, in which competition policy contributes to sustainable development and the global increase in the competitiveness of the national economy.

The competition between economic actors on the market in the Republic of Moldova

Several economic entities operate on the national market, competing to obtain a better position on the market. According to the national legislation,

depending on their size, large, medium-sized, small, and micro enterprises can be distinguished. According to national statistics, in the year 2022 a total number of 62,100 economic units were operating in the Republic of Moldova (NBS, 2022).

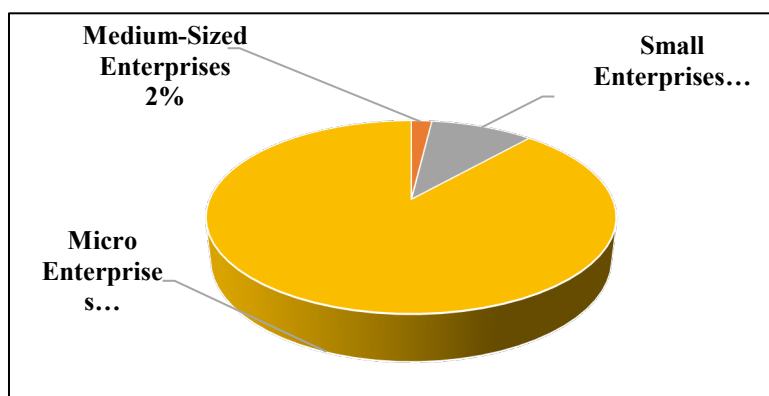


Figure 1. Small and Medium-Sized Enterprises in Moldova

Source: Authors, by using BNS.md database (2022)

The SMEs in the Republic are facing significant challenges, one of the most important ones being the limited access to finance. Bank loans can be difficult for the SMEs to access due to the substantial collateral required and the high interest rates.

This limits the ability of SMEs to expand and to innovate. However, despite these challenges, the prospects for the SMEs in Moldova are positive.

Continued government support, along with a strategic focus on digitalization and innovation can provide these businesses with opportunities for growth and expansion. For example, the use of digital technologies can open new markets and improve operational efficiency.

In addition to this, the focus on quality and on the development of innovative products and services can help the SMEs to stand out on the international markets. The SMEs in Moldova play a crucial role in the economy and have significant potential for growth and innovation (Table no. 1).

The share of SMEs reporting in the years 2021-2022 on the main indicators

Table 1

Years	Enterprises (thousands)			Average annual number of employees (thousands)			Sales revenues (billions of MDL)		
	Total	SMEs	Share of SMEs in total, %	Total	SMEs	Share of SMEs in total, %	Total	SMEs	Share of SMEs in total, %
2022	62.6	62.1	99.2	529.3	347.3	65.6	612.0	274.8	44.9
2021	60.3	59.8	99.1	532.5	342.1	64.2	488.0	225.0	46.1

Source: Authors, by using BNS.md (2022)

Table no. 1 reflects the share of small and medium-sized enterprises (SMEs) in the total number of enterprises in the Republic of Moldova in the years 2021-2022 and it provides a detailed picture of the place that SMEs occupy in the national economy.

These data are important for the analysis of the national economic structure, the dynamics of the labour market and of commercial activities in a period influenced by the COVID-19 pandemic. In 2021, there were 60.3 thousand enterprises, of which 59.8 thousand were SMEs, representing 99.1% of the total. In the year 2022, the total number of enterprises increased to 62.6 thousand, and SMEs reached 62.1 thousand, maintaining an almost full share of 99.2%.

This evolution reflects a national economic landscape dominated by SMEs, highlighting their fundamental role in terms of generating economic activity and creating business opportunities.

Regarding the share of the total number of SMEs accounted for by micro, small, and medium-sized SMEs in the NFBS, over 90% of all SMEs in the NFBS of the EU-27, the COSME countries (excluding Bosnia and Herzegovina and Moldova), and the UK were micro-SMEs.

A labour force analysis shows that SMEs are also the main employers in the economy of the Republic of Moldova. In the year 2021, out of a total of 532.5 thousand employees, SMEs employed 342.1 thousand, (i.e. 64.2%). In the year 2022, although the total number of employees decreased slightly to 529.3 thousand, the share of employees in SMEs increased to 65.6%, indicating the fact that SMEs can be more resilient in the face of economic shocks and can maintain or even increase the number of jobs when confronted with economic fluctuations.

The SMEs sales revenue reflects their ability to generate profit and to contribute to GDP. In 2021, SMEs generated revenues of 225 billion MDL, representing 46.1% of the total annual sales revenue. In 2022, SMEs revenues increased impressively to 274.8 billion MDL, which could indicate an improved ability to adapt to market changes and to exploit new business opportunities. However, their share in total sales revenue fell slightly to 44.9%, possibly due to the increasing revenue recorded by large enterprises or the changes in the economic structure. These data underline the importance of SMEs as a pillar of stability and economic growth in the Republic of Moldova. The increase in the number of enterprises and in the share of employees in SMEs, accompanied by a substantial increase in sales revenue, shows a trend of strengthening and growth of the SMEs sector within the national economy.

Nevertheless, the slight decrease in the share of the SMEs in total sales revenue could signal an increasing competition or the need to tackle operational efficiency issues. In addition to this, it is crucial that government policies continue to support the SMEs, by facilitating access to finance and technology, in order to stimulate innovation and to respond to market challenges.

The factors which contribute to this growth include the adaptability to consumer demand and supply chain efficiency. The retail market phenomenon seems

to have responded well to the changes in market demand, with entities adapting their offers and sales techniques to remain competitive.

Table no. 2. shows the evolution of the turnover in the retail trade of food products in the Republic of Moldova during the 2015-2021 period.

Sales revenue in the food industry

Table 2

Food industry	Sales revenues (millions of MDL)						
	2015	2016	2017	2018	2019	2020	2021
SMEs	3,435.57	3,492.64	3,892.54	4,011.05	4,221.82	3,902.97	4,639.79
Large enterprises	11,858.27	13,146.43	14,019.60	14,415.91	15,322.43	16,251.60	18,766.18

Source: Authors, by using BNS.md database (2022)

When analysing the data, a constant growth can be observed both in absolute terms (mill. MDL) and in relative terms (percentage structure within the retail trade). Figure no. 2 highlights the evolution of the revenue difference according to the data of previous years, and it highlights a dynamic growth at the general level, without reaching negative values in terms of revenue generation.

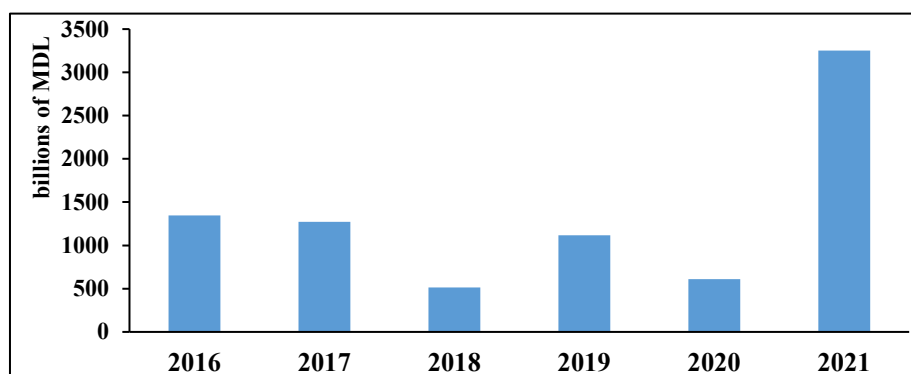


Figure 2. The evolution of SMEs revenues (comparison with the previous years)

Source: Authors, by using BNS.md database (2022)

According to the presented information, significant revenue increases of the economic entities in the food industry field can be noticed in the year 2016, compared to 2015, with 1,345.2 million MDL.

The effects of the COVID 19 pandemic were felt in 2020, a year in which an increase was noted compared to the previous periods, yet the value of the generated revenue was lower. Due to the active factors in the food industry market, the year 2021 was marked by an increase in revenue compared to the previous year, i.e. 3,251.41 million MDL, which showed the fact that the actors in the food industry were active.

Thus, from 2015 to 2021, the value of the revenue from the food industry increased by 153.04%. Figure no. 3 illustrates an increase in the number of economic entities in the 2015-2022 period, in all regions of national development, from 33,279 in 2015 in the Municipality of Chisinau, to 37,997 at the end of 2022.

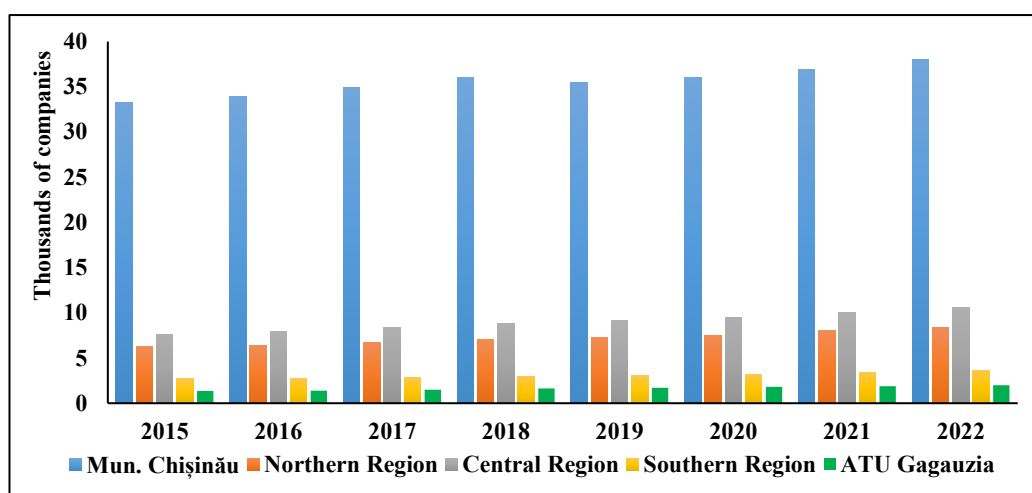


Figure 3. The number of economic units by area (SMEs) (2015-2022)

Source: Authors, by using BNS.md database (2022)

Overall, in Table no. 3, the increasing evolution over the years of the number of economic entities, from 51 thousand to 62 thousand, with a margin of 18-19% in 2022 compared to 2015, is noted.

Companies on the market in the Republic of Moldova

Table 3

Year	2015	2016	2017	2018	2019	2020	2021	2022
Total	51,216	52,320	54,313	56,463	56,714	58,063	60,305	62,608

Source: Authors, by using BNS.md database (2022)

According to the data presented in Figure no. 4, it can be notice that in the year 2022 the highest concentration of economic entities was in the municipality of Chisinau (with a share of 61%), and the lowest in ATU Găgăuzia (3%).

When establishing the degree of concentration of economic units on the market in the country, the Herfindahl-Hirschman IHH concentration index method recommended by Roberts *et al.* (2014) will be used, which is calculated by squaring the market share of all the factors in the sector.

The practice of the Romanian Competition Council (2020) shows that if the IHH value is lower than 1000, the degree of market concentration is considered weak; at an index value between 1,000 and 1,800, market concentration is considered moderate, and an IHH index value above 1,800 is considered high.

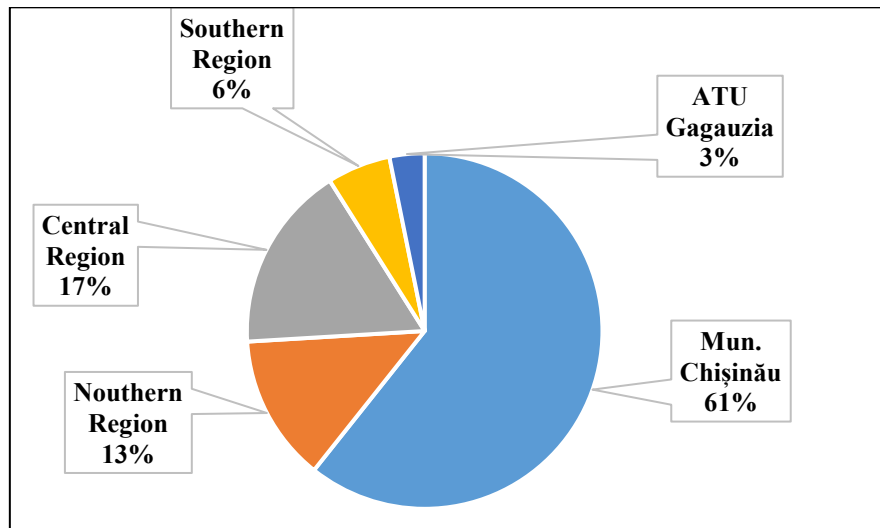


Figure 4. Companies' distribution by Moldova Regions

Source: Authors, by using BNS.md database (2024)

The IHH calculation is done with formula 1, recommended by Săvoiu, Crăciuneanu and Țaicu (2010), and applied by Stanciu (2015).

$$IHH = \sum G_i^2 \quad (1)$$

where N_i is the total number of economic units in the region, and G_i is the concentration share i , calculated according to Table no. 4. According to the data presented in table 4, IHH has the value of 4,193.87, which indicates a high degree of concentration of the economic market at the national level.

The share of economic units by regions of the Republic of Moldova

Table 4

Region	Economic units (N_i)	G_i (%)	G_i^2
North	8,364	13.35932	178.4713
Centre	10,635	16.98665	288.5461788
Municipality of Chişinău	37,997	60.69033	3,683.315805
South	3,618	5.778814	33.39469366
ATU Găgăuzia	1,994	3.184896	10.14356571
Total	62,608	100.00	4,193.871544

Source: The authors' own contributions, based on BNS.md (2024)

The research illustrates that a high value of the IHH index, i.e. higher than the figure 1,800, which is considered high, is found in the municipality of Chisinau, with 3,683.31, and the weakest is in the ATU Găgăuzia, with 10.14.

SMEs Contribution to the Economy of the Republic of Moldova

SMEs represent a significant source of employment in the Republic of Moldova. These enterprises, although small in terms of employees, have a substantial collective impact on the labor market. They employ locals in various fields such as manufacturing, trade, services, and agriculture.

By creating jobs, SMEs contribute to reducing unemployment and improving the living standards of local communities. This is essential because employment is a fundamental pillar of economic and social development. A distinctive feature of SMEs is that the profits generated by them tend to remain in local communities. Unlike multinational corporations or large retail chains, which may repatriate profits outside the country, SMEs often have strong local roots. This means that the profits obtained by SMEs are used to invest in the development of local businesses, improving infrastructure, or supporting community initiatives.

In 2021, in the Republic of Moldova, the growth rate of SME employment was 0.5%, below the European average of 1.4%, while SME value added reached 12.6%, which is 3.9 percentage points above the European average value of 8.7% (European Commission, 2023). Furthermore, in Moldova, both small and medium-sized SMEs accounted for a larger proportion of the total number of NFBS SMEs in 2020 than in any other country for which Eurostat data are available (Table 5).

Share of SMEs by micro, small and medium-sized SMEs in the NFBS

Table 5

Country	Micro SMEs	Small SMEs	Medium Sized SMEs
AL	92.8%	6.0%	1.2%
AM	94.6%	4.6%	0.8%
BA	89.2%	8.8%	1.9%
IS	94.0%	5.1%	0.9%
MD	87.4%	10.5%	2.1%
ME	96.5%	3.0%	0.6%
MK	90.8%	7.8%	1.3%
RS	95.9%	3.4%	0.8%
TR	94.3%	4.9%	0.8%
UA	96.2%	3.2%	0.6%
UK	90.6%	8.1%	1.3%
EU-27	93.6%	5.6%	0.9%

Source: European Commission (2023)

From the perspective of the number of SMEs per capita in the EU-27, COSME, and UK, as well as the value generated by these, in the year 2020, the Republic of Moldova ranked last with 18 SMEs per capita and an added value of 2.4 billion euros (European Commission, 2023)

Therefore, these profits have a multiplier effect on the local economy and contribute to the prosperity of communities. SMEs bring a diversity of products and services to the market. They could respond to the specific demands of customers and

innovate in their fields of activity. This leads to a diversification of market supply, offering consumers varied options and customized products. For example, SMEs in the agri-food sector can produce traditional and local products that add value to the market and reflect the cultural specificity of the Republic of Moldova. This diversity benefits consumers by providing them with more choices and stimulating competition, which can lead to innovation and improvement in the quality of products and services available on the market.

4. Conclusions

The research has highlighted the fact that small and medium-sized enterprises, being an important source of innovation, represent an acceleration engine, generating stable economic development for a country.

Thus, according to the research stipulated in the paper, we have highlighted the fact that SMEs are the main source of revenue generation in a state's budget, SMEs also indicating an increased degree of economic and competitive efficiency.

This factor is specified in the research, where, in the year 2021, the SMEs in the food industry generated phenomenal revenues. The indicator is also influenced by the increase in the number of SMEs in the given industry, which, along with the increase in the number of enterprises, also increases competition at the economic and social levels. In this sense, it stimulates fierce competition in the economic market in the country. Given the fact that in the Republic of Moldova, according to the regional development policy implemented by the Government, there are 6 development regions (however, for one region, Transnistria, the data were excluded), the research on the concentration of economic units (SMEs) in the food industry was carried out for the rest of the regions, namely North, Centre, South, the Municipality of Chisinau, ATU Găgăuzia.

As an indicator, the IHH index was calculated, to determine the degree of concentration of economic units on the market in the country. Thus, we note as a conclusion a normal increase in the IHH index in the municipality of Chisinau, compared to the other regions. In this sense, it is essential for the regulatory authorities to supervise and take stringent measures to encourage an unbiased competitive environment, with the uniform implementation of development policies across the regions, in order to prevent potential market abuses.

References

1. Amarfii-Railean, N., (2022), *Eficiențizarea managementului sectorului agricol în condițiile industriei 4.0*, PhD Thesis, online, available at http://www.cnaa.md/files/theses/2022/58212/nelli_amarfii_thesis.pdf, accessed 12.06.2024.
2. Barkema A., Drabentstott, M., Tweeten L., (1991), *The competitiveness of U.S. Agriculture in the 1990s*. In: *Agricultural Policies in the New Decade*. Washington: RFF Press, p. 23.

3. BNS.md., (2021), Agrifood companies, Statistical database/Baza de date statistice, available at www.statistica.md, accessed 11.06.2024.
4. BNS.md (2022), Agrifood companies, database Statistical database/Baza de date statistice. available at www.statistica.md, accessed 10.06.2024.
5. Business Class, (2023), The retail market is trying to recover while consumers remain cautious/Piața de retail încearcă să-și revină consumatorii rămân precauți, available at: <https://businessclass.md/ro/comercializare/piata-de-retail-incearca-sa-si-revina-consumatorii-raman-precauti/> accessed 01.06.2024.
6. Consiliul Concurenței, (2020) National program 2015-2020/Program national 2015-2020, available at: www.competition.md [https://competition.md/public/files/uploads/files/transparenta/cProgram % 20 concurrenta%20si%20ajutor%20de%20stat.pdf](https://competition.md/public/files/uploads/files/transparenta/cProgram%20concurrenta%20si%20ajutor%20de%20stat.pdf), accessed 10.06.2024.
7. Consiliul Concurenței, Romania, (2020), Herfindahl-Hirschman Index/Indicele Herfindahl-Hirschman (IHH), available at <https://competitionrules.eu/glosar/indicele-herfindahl-hirschmann-ihh/>, accessed 10.05.2024.
8. Ghencea, A., Zanet, V., Stanciu, S. (2022), Liberalization and Globalization of the Food Retail Sector in the Republic of Moldova, available at: https://www.researchgate.net/publication/362603117_Liberalization_and_Globalization_of_the_Food_Retail_Sector_in_the_Republic_of_Moldova, accessed 20.05.2024.
9. Guțu E., 2012, Competition policy of the Republic of Moldova: Theoretical aspects [Politica de concurență a Republicii Moldova: Aspecte teoretice], UTM Chișinău, https://ibn.idsi.md/sites/default/files/imag_file/203-206_21.pdf, accessed 10.05.2024.
10. Mocanu, N., Pila, M., Stanciu, S., (2024), Understanding Food Consumption Patterns: An Analysis of Regional Disparities and Socio-Economic Factors in Moldova, Annals of the University "Dunărea de Jos" University of Galați, Fascicle I. Economics and Applied Informatics, 30(1), pp. 125-131, DOI: <https://doi.org/10.35219/eai15840409398>.
11. Munteanu (Pila), M., Stanciu, S., 2019, Comparative Aspects of Food Security in the Republic of Moldova and Romania, Proceedings of the 33rd International Business Information Management Association Conference: Education Excellence and Innovation Management through Vision 2020 (Granada, Spain, April 10-11, 2019), Vol. I-X, pp. 169-180, Ed. Soliman, K.S., ISBN: 978-0-9998551-2-6, available at <https://www.webofscience.com/wos/woscc/full-record/WOS:000503988800017>, accessed 11.04.2024
12. National Bureau of Statistics of Moldova (2022)/ Biroul național de statistică din Moldova (2022), available at: https://statistica.gov.md/index.php/ro/activitatea-intreprinderilor-mici-si-mijlocii-in-anul-2022-9557_60492.html, accessed 10.05.2024.
13. Săvoiu, G., Crăciuneanu, V., Țaicu, M., (2010), A new statistical method for analyzing market concentration or diversification [O metodă statistică nouă de analiză a concentrării sau diversificării piețelor], Romanian Journal of Statistics/Revista Română de Statistică, 2/2010, pp. 1-6, available at https://www.revistadestatistica.ro/Articole/2010/A3ro_2-2010.pdf, accessed 21.05.2024.
14. Stanciu, S., Rizea, R. D., Ilie A. G., 2015, Study on the Competitiveness of the Romanian Meat Processing Industry. Amfiteatru Economic, 17 (Special No. 9), pp. 1331-1345, ISSN: 1582-9146, eISSN:2247-9104, online, available at https://www.researchgate.net/publication/289577355_Study_on_the_Competitiveness_of_the_Romanian_Meat_Processing_Industry, accessed 10.05.2024.

15. Stanciu, S., Vochin, A., Sîrbu, M., Bratoveanu, D. (2019). Food Retail in Romania. Market Overview, available at https://www.researchgate.net/publication/335175558_FOOD_RETAIL_IN_ROMANIA_MARKET_OVERVIEW, accessed 19.05.2024.
16. Stanciu, S., Radu, R. I., Sapira, V., Bratoveanu, B. D., Florea, A.M., (2020). Consumer Behavior in Crisis Situations. Research on the Effects of COVID-19 in Romania. Annals of “Dunărea de Jos” University of Galati. Fascicle I. Economics and Applied Informatics. Years XXVI –no1/2020. ISSN-L 1584-0409. ISSN-Online 2344-441X. pp. 5-13. <https://doi.org/10.35219/eai1584040975> accessed June 1, 2024. accessed 18.05.2024.
17. The Government of Moldova, (2023), Food Security Strategy for the years 2023-2030/Strategia Securității Alimentare pentru anii 2023-2030, available at: https://cancelaria.gov.md/sites/default/files/document/attachments/531_0.pdf accessed 12.05.2024.
18. Zanet, V., Stanciu, S., 2020, Quality of Agrifood Products in the Republic of Moldova. Legislative and Organizational Issues, Proceedings of The 35th International-Business-Information-Management-Association Conference (IBIMA): Education Excellence and Innovation Management: A 2025 Vision to Sustain Economic Development During Global Challenges, (Seville, Spain, April 01-02, 2020), pp. 15441-15449, Ed. Soliman, K.S., ISBN: 978-0-9998551-4-0, available <https://www.webofscience.com/wos/woscc/full-record/WOS:000661489809023>. accessed 12.05.2024.