

**M. MASLAK, M. FOSHCHII****RESEARCH ON THE STATE AND DEVELOPMENT TRENDS OF DAIRY ENTERPRISES IN UKRAINE**

This article presents a comprehensive study of the state and development trends of Ukrainian dairy industry enterprises over the period from 2010 to 2023. The study is based on the analysis of a wide range of macroeconomic and microeconomic indicators, including livestock dynamics, production and sales volumes, enterprise structure, employment and labor productivity, capital investment, profitability, and foreign trade activity. The objective of the research is to evaluate how the industry has evolved under the influence of structural transformations, geopolitical shocks, demographic decline, and economic instability, particularly in the context of the full-scale war that began in 2022. The findings demonstrate a steady and profound degradation of the raw material base, as the number of cows more than halved over the analyzed period. This led to a corresponding decline in milk production volumes and imposed significant limitations on the industry's capacity for stable growth. The structural analysis of enterprises reveals a pronounced shift towards small and micro-enterprises, which currently constitute over 70% of all active market participants. While these entities show flexibility and adaptability, they often lack the investment potential and technological capabilities needed for systemic modernization. The study also highlights a substantial decrease in the number of employees in the industry, accompanied by a notable increase in labor productivity. This reflects both the effect of technological advancements and the growing pressure on remaining labor resources. Although capital investment trends are highly volatile and dependent on the political environment, there is a gradual increase in interest toward intangible assets, particularly digital solutions and innovations. Financial indicators show a transition from chronic unprofitability to a state of relative stability and even profitability in recent years, despite the war. The growing share of profitable enterprises, alongside improved efficiency metrics, confirms the adaptive capacity of the industry. However, the foreign trade analysis reveals a decrease in export volumes and a growing dependence on imports, raising concerns about the industry's global competitiveness. In general, the Ukrainian dairy industry is undergoing a deep and complex transformation. The research concludes that ensuring long-term sustainability requires a strategic shift toward innovation-driven development, targeted government support, investment incentives, and the creation of effective tools to assess and stimulate enterprise growth in a changing environment.

**Keywords:** dairy industry; Ukrainian dairy enterprises; enterprise development; development trends; changing environment

**М.В. МАСЛАК, М.Д. ФОЦІЙ****ДОСЛІДЖЕННЯ СТАНУ ТА ТЕНДЕНЦІЙ РОЗВИТКУ ПІДПРИЄМСТВ МОЛОЧНОЇ ПРОМИСЛОВОСТІ УКРАЇНИ**

У статті представлено комплексне дослідження стану та тенденцій розвитку підприємств молочної промисловості України у 2010–2023 роках. Дослідження базується на аналізі широкого спектра макро- та мікроекономічних показників, зокрема динаміки поголів'я худоби, обсягів виробництва та реалізації продукції, структури підприємств, чисельності персоналу, продуктивності праці, інвестиційної активності, фінансових результатів і зовнішньоекономічної діяльності. Метою роботи є оцінка того, як галузь трансформувалася під впливом структурних змін, геополітичних викликів, демографічного спаду та економічної нестабільності, особливо в умовах повномасштабної війни, що почалася у 2022 році. Результати дослідження свідчать про системну деградацію сировинної бази галузі, оскільки за аналізований період чисельність корів скоротилася більш ніж удвічі. Це зумовило значне зменшення обсягів виробництва молока та обмежило потенціал для подальшого зростання. Структурний аналіз підприємств засвідчує чіткий зсув у бік малих і мікропідприємств, які нині становлять понад 70% активних учасників ринку. Хоча такі суб'єкти демонструють гнучкість і адаптивність, їм здебільшого бракує інвестиційного ресурсу й технологічних можливостей для повноцінної модернізації. Також виявлено суттєве скорочення чисельності працівників галузі, яке супроводжується зростанням продуктивності праці. Це є наслідком як впровадження новітніх технологій, так і підвищеного навантаження на персонал. Інвестиційна активність демонструє високу волатильність і залежність від політичної ситуації, однак простежується зростання інтересу до нематеріальних активів, зокрема цифрових рішень. Фінансові показники вказують на поступовий вихід галузі з фази хронічної збитковості: упродовж останніх років більшість підприємств декларують прибутки навіть попри воєнні дії. Зростання частки прибуткових підприємств і поліпшення показників ефективності підтверджують адаптивний потенціал сектора. Водночас аналіз зовнішньоекономічної діяльності виявляє зменшення обсягів експорту й посилення імпортозалежності, що ставить під загрозу конкурентоспроможність української продукції на світовому ринку. Загалом, українська молочна промисловість перебуває на етапі глибокої трансформації. З метою забезпечення її стійкого розвитку обґрунтовано необхідність переходу до інноваційної моделі з акцентом на державну підтримку, інвестиційні стимули та створення ефективних інструментів оцінки й підтримки розвитку підприємств в умовах змінного середовища.

**Ключові слова:** молочна промисловість; молочні підприємства України; розвиток підприємств; тенденції розвитку; мінливе середовище

**Introduction.** The Ukrainian dairy industry plays an essential role in ensuring national food security, supporting regional economies, and maintaining employment in rural areas. However, over the past decade, the sector has undergone profound changes under the influence of structural, geopolitical, and economic factors. Since 2014, the sector has faced a gradual deterioration in the raw material base, disruptions in supply chains, and declining investment activity. The full-scale war in 2022 further exacerbated the situation, leading to the destruction of infrastructure, loss of productive assets, and disruption of exports. Despite these challenges, many dairy enterprises have demonstrated significant adaptability, ensuring continuity of operations

and even achieving growth in certain performance indicators.

**Problem statement.** Existing studies often focus on specific aspects of dairy industry performance, such as production volume, export potential, or financial results. However, there is a lack of comprehensive analysis that would integrate production, economic, labor, and investment indicators to assess the state and development trends of the entire industry in a systemic manner. Moreover, most of the available research does not fully capture the transformational effects of the full-scale war on the functioning of dairy enterprises. Therefore, it is necessary to provide a detailed assessment of the current state of the industry, its key dynamics over time, and the

challenges it faces in the context of a changing economic and geopolitical environment.

**The purpose of this study** is to evaluate the state and development trends of Ukrainian dairy industry enterprises in 2010–2023, considering structural changes in production, labor force, investment dynamics, financial performance, and foreign trade. The study also aims to identify the factors that hinder or promote the effective functioning of the industry and to provide analytical support for the formulation of strategic decisions regarding its further development.

**Review of key research and literature.** Review of Key Research and Literature The analytical framework of this study is based on the findings of Ukrainian and international researchers in the fields of agroecconomics, industrial policy, and food supply chains. Scholars such as Havryliuk (2020), Kryvtsova and Lutsenko (2019), and Khandii et al. (2021) emphasize the importance of modernization and investment in the processing segment of the dairy industry. Studies by the Institute of Agrarian Economics of Ukraine and reports by the State Statistics Service provide valuable empirical data on livestock dynamics, production volumes, and financial indicators. International research from FAO and OECD adds a comparative dimension, highlighting trends in productivity, market integration, and resilience. However, the current literature still lacks a holistic, quantitative analysis of the dairy industry's systemic transformation during wartime conditions, which this study seeks to address.

**Presentation of the main material.** Let's start with the analysis of the dairy industry production base – with the assessment of the raw material potential, because it forms the foundation for the stable functioning and development of enterprises. One of the key indicators in this context is the number of farm animals, in particular cows, which determines the volume of possible milk production. In combination with data on the production of livestock products main types, these indicators allow us to trace trends in the change of the raw material base, identify problem areas and assess the real potential of the industry to increase processing volumes.

The dynamics of the farm animals' number (cattle (cows), sheep and goats) as of January 1 for 2010–2024 is shown in Figure 1.

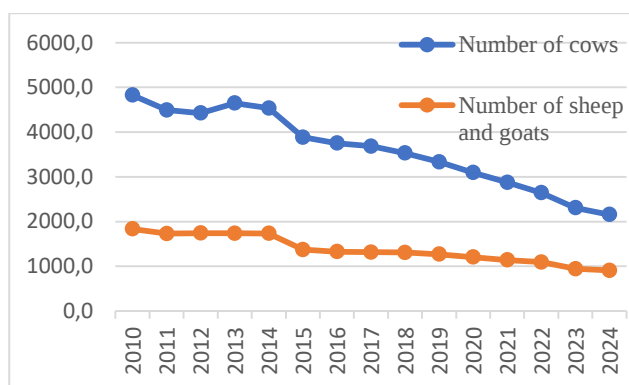


Figure 1 – Dynamics of the farm animals' number as of January 1, thousand heads for 2010–2024 (constructed by the author based on [1])

Analysis of the cattle dynamics (cows), sheep and goats in Ukraine for the period 2010–2024 indicates a steady and deep degradation of the raw material base for the dairy industry. In 2010, the number of cows was 4826.7 thousand heads, but in 2024 it decreased to a critical 2156.2 thousand, so the decrease was more than 55%. A similar trend is observed in the number of sheep and goats, where the reduction from 1832.5 thousand in 2010 to 906.3 thousand in 2024 is more than 50%.

A particularly sharp decline was recorded after 2014, coinciding with the annexation of Crimea and the start of hostilities in Donbas. However, even more significant changes occurred after 2021, so in just two years the number of cows decreased from 2874.0 to 2307.1 thousand in 2023, and in 2024 it is even lower. This is already directly related to a full-scale invasion, loss of control over a significant part of agricultural territories, logistical gaps, evacuation of livestock or its destruction in combat zones.

Such a sharp decline in livestock potential limits the possibilities of the dairy industry not only in terms of current production volumes, but also in terms of prospects for further development. The situation requires not just stabilization, but the formation of a strategic vision for the restoration of the raw material base in the post-war period, including state support, incentives for farms and modernization of livestock farming.

Next, it is advisable to analyze the dynamics of the main types of livestock products production, in particular milk, as a key resource for the functioning and development of dairy industry enterprises.

The dynamics of milk production in Ukraine for 2010–2023 is shown in Figure 2.

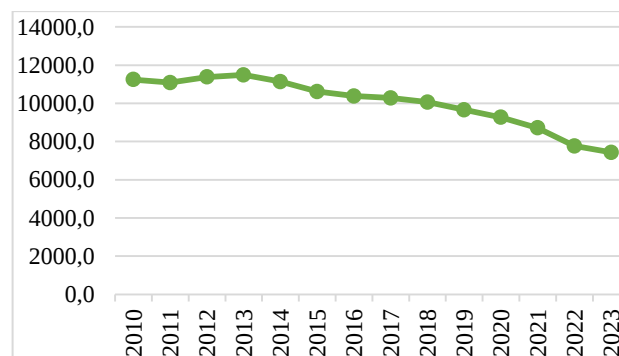


Figure 2 – Dynamics of milk production in Ukraine for 2010–2023, thousand tons (constructed by the author based on [1])

The data in Figure 2 clearly reflect a steady trend towards a decrease in the volume of milk production in Ukraine during 2013–2023. If in 2010 the volume of production was 11.25 million tons, then already in 2023 it decreased to 7.43 million tons, which indicates a decrease of more than 34% during the analyzed period. The largest volumes were observed in 2013, after which a gradual but steady decline began.

The decline after 2021 is particularly noticeable. In 2022–2023, production decreased by almost 1.3 million tons. This trend, taking into account armed aggression, loss of controlled territories, and destabilization of

agriculture in a number of regions, is largely explained by the general decline in the production potential of the industry. At the same time, it indicates serious risks for the dairy industry in the context of securing the raw material base.

In view of the significant reduction in the number of productive livestock and the volume of milk production in Ukraine during 2010-2023, it is important to consider the quantitative dynamics of the participants in the dairy industry. This will allow us to assess how the structure of the dairy industry was transformed, in particular, whether there was a curtailment of production, the exit of less stable entities from the market, or, on the contrary, adaptation and preservation of the various scales enterprises' presence in the changing environment. Table 1 shows the dynamics of operating dairy enterprises with a division into large, medium, small and micro enterprises for 2010-2023.

Table 1 – Operating enterprises' dynamics of the dairy industry of Ukraine with the division into large, medium, small and micro enterprises for 2010-2023 (*constructed by the author based on [2]*)

| Years | Total, units | Large enterprises |                             | Medium enterprises |                             | Small enterprises |                             | of them micro enterprises |                             |
|-------|--------------|-------------------|-----------------------------|--------------------|-----------------------------|-------------------|-----------------------------|---------------------------|-----------------------------|
|       |              | Units             | in % to the total amount, % | Units              | in % to the total amount, % | Units             | in % to the total amount, % | Units                     | in % to the total amount, % |
| 2010  | 449          | 10                | 2,2                         | 186                | 41,4                        | 253               | 56,4                        | 186                       | 41,4                        |
| 2011  | 441          | 20                | 4,5                         | 161                | 36,5                        | 260               | 59,0                        | 193                       | 43,8                        |
| 2012  | 417          | 22                | 5,3                         | 150                | 36,0                        | 245               | 58,7                        | 166                       | 39,8                        |
| 2013  | 467          | 24                | 5,1                         | 134                | 28,7                        | 309               | 66,2                        | 226                       | 48,4                        |
| 2014  | 401          | 9                 | 2,2                         | 133                | 33,2                        | 259               | 64,6                        | 188                       | 46,9                        |
| 2015  | 392          | 8                 | 2,0                         | 129                | 32,9                        | 255               | 65,1                        | 188                       | 48,0                        |
| 2016  | 355          | 6                 | 1,7                         | 130                | 36,6                        | 219               | 61,7                        | 155                       | 43,7                        |
| 2017  | 380          | 10                | 2,6                         | 130                | 34,2                        | 240               | 63,2                        | 169                       | 44,5                        |
| 2018  | 401          | 10                | 2,5                         | 128                | 31,9                        | 263               | 65,6                        | 191                       | 47,6                        |
| 2019  | 412          | 12                | 2,9                         | 127                | 30,8                        | 273               | 66,3                        | 192                       | 46,6                        |
| 2020  | 394          | 11                | 2,8                         | 118                | 29,9                        | 265               | 67,3                        | 192                       | 48,7                        |
| 2021  | 416          | 14                | 3,4                         | 109                | 26,2                        | 293               | 70,4                        | 213                       | 51,2                        |
| 2022  | 328          | 11                | 3,3                         | 96                 | 29,3                        | 221               | 67,4                        | 147                       | 44,8                        |
| 2023  | 366          | 11                | 3,0                         | 93                 | 25,4                        | 262               | 71,6                        | 195                       | 53,3                        |

The dynamics of the operating enterprises number in 2010-2023 reflects the gradual transformation of the dairy industry structure under the influence of a changing environment. The total number of dairy enterprises during this period ranged from 449 in 2010 to 366 in 2023. The lowest value was recorded in 2022 – 328 enterprises, which, apparently, was the result of a full-scale invasion and temporary loss of control over part of the territories.

Especially it is the need to highlight the structure of enterprises by size. Small enterprises dominated throughout the period. Their share constantly exceeded 60%, and in recent years (2021-2023) reached over 70%. In 2023, small enterprises accounted for 71.6% of the total, of which the absolute majority (195 enterprises, or 53.3%) were micro-enterprises. This indicates a deep fragmentation of the dairy industry and its dependence on small producers, which, despite difficult conditions, remain active, probably due to flexibility, localization and adaptability.

Instead, medium-sized enterprises gradually lost their share – from 41.4% in 2010 to 25.4% in 2023. This

reduction indicates that the medium-sized segment is the most vulnerable to crisis phenomena.

Although the absolute number of large enterprises has practically not changed (from 10 to 11 units) from 2010 to 2023, this does not indicate stability, as their share in the overall structure of the dairy industry remained extremely small, within 2-5%. This level of representation indicates the limited influence of large players on the overall dynamics of the industry, which, in turn, is formed mainly at the expense of small and micro enterprises.

In general, the structure of the dairy industry is shifting towards micro and small enterprises, while the number of medium and large producers is decreasing. This highlights the need in state support for stable and competitive production units, particularly in the context of increasing competition, risks and limited resources. This situation also raises the issue of strategizing the further development of the dairy industry based on targeted support for investment-active enterprises and promoting consolidation, cooperation and technological re-equipment of production.

The next stage of analyzing the state of the dairy industry is the assessment of labor potential. Let's start with the number of employees dynamics in enterprises operating in this area. This indicator is not only a production activity scale indicator, but also evidence of the industry's social role and its ability to maintain sustainable employment in the regions. Given the transformation processes in the economy, the impact of demographic changes, labor migration and the consequences of the war, the analysis of this parameter allows us to better understand the nature and trends in the dairy industry development of Ukraine in 2010-2023. The dynamics of the employees number in dairy industry entities in 2010-2023 is presented in Table 2.

Table 2 shows that during 2010-2023, the number of employees in Ukrainian dairy industry entities demonstrated a steady trend of decline.

Table 2 – Dynamics of the number of employed workers in the dairy industry of Ukraine in 2010-2023 (*constructed by the author based on [3]*)

| Years | Total, persons | of them individual entrepreneurs, persons | in % to the total indicator, % |
|-------|----------------|-------------------------------------------|--------------------------------|
| 2010  | 69811          | 793                                       | 1,1                            |
| 2011  | 64966          | 742                                       | 1,1                            |
| 2012  | 66413          | 945                                       | 1,4                            |
| 2013  | 63605          | 970                                       | 1,5                            |
| 2014  | 56234          | 901                                       | 1,6                            |
| 2015  | 51109          | 831                                       | 1,6                            |
| 2016  | 49937          | 942                                       | 1,9                            |
| 2017  | 51720          | 1019                                      | 2,0                            |
| 2018  | 51423          | 1186                                      | 2,3                            |
| 2019  | 52284          | 1160                                      | 2,2                            |
| 2020  | 49185          | 1103                                      | 2,2                            |
| 2021  | 47609          | 993                                       | 2,1                            |
| 2022  | 38785          | 785                                       | 2,0                            |
| 2023  | 36076          | 943                                       | 2,6                            |

So, in 2010, the industry employed almost 70,000 people, and in 2023, only 36,000, i.e., a decrease of almost 50%. This may indicate a decrease in production scale and, accordingly, the loss of the economic

potential's part. The decline was especially noticeable after 2013, and the sharpest from 2021 to 2023, which can be attributed not only to economic factors, but also to a full-scale war.

At the same time, the share of employees among individual entrepreneurs is increasing from 1.1% in 2010 to 2.6% in 2023. This indicates a certain shift in the focus of employment towards self-employment and microbusiness, which may be a reaction to the impact of the changing environment and the reduction of large and medium-sized enterprises.

For a comprehensive analysis of the dairy industry state, it is important to study the dynamics of labor productivity, because this indicator directly reflects the efficiency of using labor resources at enterprises. Table 3 presents data on labor productivity at enterprises of Ukrainian dairy industry for 2010-2023.

Table 3 – Dynamics of labor productivity at dairy enterprises in Ukraine for 2010-2023 (*constructed by the author based on [4]*)

| Years | Labor productivity                                             |                              |
|-------|----------------------------------------------------------------|------------------------------|
|       | Per 1 employed person in constant prices of 2021, thousand UAH | In % to the previous year, % |
| 2010  | 495,5                                                          | 116,3                        |
| 2011  | 554,2                                                          | 111,8                        |
| 2012  | 646,8                                                          | 116,7                        |
| 2013  | 758,6                                                          | 117,3                        |
| 2014  | 843,7                                                          | 111,2                        |
| 2015  | 899,5                                                          | 106,6                        |
| 2016  | 1095,9                                                         | 121,8                        |
| 2017  | 1186,4                                                         | 108,3                        |
| 2018  | 1303,2                                                         | 109,8                        |
| 2019  | 1453,1                                                         | 111,5                        |
| 2020  | 1558,8                                                         | 107,3                        |
| 2021  | 1618,3                                                         | 103,8                        |
| 2022  | 1757,2                                                         | 108,6                        |
| 2023  | 1955,6                                                         | 111,3                        |

In 2010-2023, labor productivity at the enterprises of the Ukrainian dairy industry demonstrated overall positive dynamics, which indicates a gradual development and increase in economic efficiency. If in 2010 the volume of production produced by one employee amounted to 495.5 thousand UAH (in constant prices of 2021), then in 2023 this indicator reached 1955.6 thousand UAH. Thus, there was a fourfold increase in labor productivity over the analyzed period.

The periods of the most active growth are 2012-2014 and 2015-2019, which can be attributed to the modernization of production, the introduction of new technologies and the reduction of costs through process optimization. 2016 was especially dynamic, when productivity increased by 21.8%. After a certain slowdown in 2020-2021 (due to the crisis phenomena associated with the pandemic and economic instability), in 2022-2023 there is again a confident growth of 8.6% and 11.3% respectively, despite the full-scale war.

It is worth noting that such dynamics are taking place against the background of a systematic decrease in the number of employees in the industry. According to preliminary data, the number of employees decreased from almost 70 thousand people in 2010 to 36 thousand in 2023. This means that the increase in labor productivity is

due not only to the intensification of labor, but also to technological innovation, automation of production and, presumably, increased requirements for personnel. This situation poses the task for enterprises not only to maintain growth rates, but also to form a stable labor base for strategic development in the conditions of demographic decline and military risk.

Analysis of the capital investments dynamics is key to assessing the development potential of dairy industry enterprises, because it is the volume of investments in the reproduction, modernization and expansion of production capacities that directly affect the industry in the medium and long term. Table 4 presents the volume of capital investments in dairy industry enterprises in Ukraine for 2012-2023, which allows to trace general trends, the influence of external factors and the degree of investment activity in a changing environment.

Table 4 – Dynamics of capital investments in dairy industry enterprises in Ukraine for 2012-2023 (*constructed by the author based on [5]*)

| Years | Capital investments | Capital investments in tangible assets | of them       |                                        | Capital investments in intangible assets | of them                                                          |                      |
|-------|---------------------|----------------------------------------|---------------|----------------------------------------|------------------------------------------|------------------------------------------------------------------|----------------------|
|       |                     |                                        | into the land | into existing buildings and structures |                                          | in concessions, patents, licenses, trademarks and similar rights | in software purchase |
| 2012  | 1136097             | 1126055                                | 1787          | 6144                                   | 10042                                    | 6930                                                             | 1622                 |
| 2013  | 1331939             | 1302187                                | 807           | 20516                                  | 29752                                    | 11286                                                            | 14248                |
| 2014  | 1966496             | 1954000                                | 4872          | 276683                                 | 12496                                    | 3977                                                             | 7585                 |
| 2015  | 1315331             | 1285297                                | 648           | 3995                                   | 30034                                    | 19906                                                            | 9720                 |
| 2016  | 1671128             | 1616698                                | 3429          | 3359                                   | 54430                                    | 22393                                                            | 31796                |
| 2017  | 2362453             | 2307015                                | 2316          | 3607                                   | 55438                                    | 18089                                                            | 8795                 |
| 2018  | 1838394             | 1800723                                | 2425          | 10303                                  | 37671                                    | 20945                                                            | 13851                |
| 2019  | 2449819             | 2391090                                | 12769         | 151905                                 | 58729                                    | 32739                                                            | 24677                |
| 2020  | 2736527             | 2692915                                | 593           | 6712                                   | 43612                                    | 8468                                                             | 26641                |
| 2021  | 2003155             | 1962200                                | 10601         | 15656                                  | 40955                                    | 1471                                                             | 28100                |
| 2022  | 1423192             | 1414270                                | 3986          | 12445                                  | 8922                                     | 410                                                              | 5533                 |
| 2023  | 2107268             | 2087293                                | 9048          | 18797                                  | 19975                                    | 7321                                                             | 11353                |

Based on Table 4, it can be concluded that in 2012-2023, the dynamics of capital investments in Ukrainian dairy enterprises was unstable, which was due to general economic fluctuations, political instability, armed aggression and aggravation of investment risks. The peak of investment fell on 2020 – 2736.5 million UAH, after which in 2021-2022 there was a significant reduction to 1423.2 million UAH in 2022. At the same time, positive dynamics were recorded in 2023: the volume of capital investments increased to 2107.3 million UAH, which may indicate a partial adaptation of enterprises to the conditions of martial law, the search for new opportunities and attempts to resume activities.

The main part of investments has traditionally been directed to tangible assets, the share of which each year amounted to more than 95% of the total. The largest volumes of investments were directed to existing buildings and structures. For example, in 2019 expenses in this area amounted to 151.9 million UAH, and in 2023 – 18.8 million UAH. This indicates a trend of shifting the

emphasis from large-scale expansion to support and partial modernization of the existing infrastructure.

Despite the general dominance of tangible investment, attention to intangible assets, such as patents, software, etc., gradually increased until 2021. A particularly large surge was observed in 2019, when 58.7 million UAH was directed to intangible assets, of which 24.7 million UAH was for software. This signals the search for innovative solutions, digital transformation of production processes, and the desire for greater flexibility and adaptability in conditions of market competition.

At the same time, after 2021 the volume of investment in intangible assets decreased sharply. In 2022, investments decreased to 8.9 million UAH in total, and in 2023 they recovered to 20 million UAH, which indicates a cautious but existing trend to reorientation towards innovative and technological renewal.

In general, the structure of capital investments indicates that most enterprises in the industry remain focused on traditional assets, but in periods of economic stability they show a willingness to invest in intangible components of development. Therefore, to increase the level of sustainability and long-term efficiency of the dairy industry, it is important to form a favorable environment to stimulate innovative capital investments as a guarantee of development in a changing environment.

For a comprehensive understanding of the Ukrainian dairy industry's development trends, it is advisable to analyze the dynamics of the products volume produced by business entities for 2012-2023. This indicator makes it possible to assess the scale of enterprises actual activities, their production activity, the level of adaptation to external challenges and the overall efficiency of functioning in conditions of structural changes in the economy, armed aggression and transformations of the domestic market.

The dynamics of the products volume produced by business entities in the dairy industry of Ukraine in 2012-2023 is shown in Figure 3.

The data in Figure 3 shows steady growth with minor fluctuations, which is evidence of the gradual development of production capacity and increased efficiency in general for the entire dairy industry.

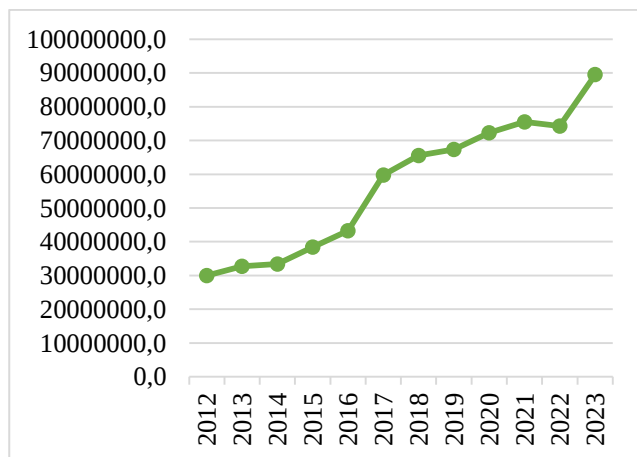


Figure 3 – Dynamics of the products volume produced by business entities of the dairy industry of Ukraine in 2012-

2023, thousand UAH (constructed by the author based on [6])

The most dynamic growth was recorded in 2017 (almost 60 billion UAH), and in 2018-2019 the values reached over 65-67 billion UAH, respectively. This indicates an intensification of enterprises production activities, despite the difficult socio-economic situation, in particular in the context of the ongoing conflict in the east of the country. In 2020-2021, a further increase in indicators is observed, which indicates a certain stabilization in the industry.

Despite the full-scale invasion in 2022, production volumes did not decrease critically (to 74.2 billion UAH versus 75.5 billion UAH in 2021), which demonstrates the adaptability of enterprises to new conditions and the preservation of the operational activity basic level. In 2023, production volumes increased sharply to a record 89.5 billion UAH, which may indicate both a partial recovery and the effect of inflationary factors, changes in the production structure and the reorientation of enterprises to new markets or segments.

The dynamics of the products volume sold by business entities in the dairy industry of Ukraine in 2010-2023 is shown in Figure 4.

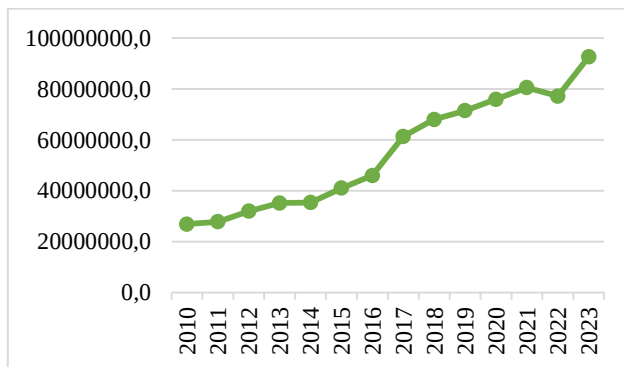


Figure 4 – Dynamics of the products volume sold by business entities in the dairy industry of Ukraine in 2010-2023, thousand UAH (constructed by the author based on [7])

During 2010-2023, the volume of Ukrainian dairy enterprises sales in Ukraine demonstrated a generally stable upward trend. If in 2010 it amounted to 26.8 billion UAH, then in 2023 the figure reached 92.6 billion UAH, which indicates a more than threefold increase. A particularly intense increase was observed in the period from 2015 to 2017, when the industry was recovering from the consequences of economic destabilization and transformations of 2014. After a slight slowdown in 2022, caused by a full-scale war, in 2023 the volumes increased again, reaching a new maximum. This may indicate both the adaptive capabilities of enterprises and the growing demand for dairy products within the country and in foreign markets.

Compared to the dynamics of manufactured products, which also grew, but less steadily and with a smaller increase in 2022, sales turned out to be more sensitive to market conditions. This may indicate the presence of stocks, changes in logistics or a shift in the structure of

distribution channels. At the same time, the synchronous growth of both indicators in 2023 can be seen as a positive signal for the overall recovery of the dairy industry.

Net profit is one of the key financial indicators that reflects the final result of the economic activity of enterprises, their ability not only to cover costs, but also to generate value in the form of income. In the context of analyzing the development of the Ukrainian dairy industry, we will examine the dynamics of net profit (or loss) of Ukrainian dairy enterprises in 2010-2023, which is given in Table 5.

Table 5 – Dynamics of net profit (or loss) of Ukrainian dairy enterprises in 2010-2023 (constructed by the author based on [8])

| Years | Net profit (loss if with "-"), thousand UAH | Enterprises that made a profit             |                          | Enterprises that suffered losses           |                    |
|-------|---------------------------------------------|--------------------------------------------|--------------------------|--------------------------------------------|--------------------|
|       |                                             | in % to the total number of enterprises, % | net profit, thousand UAH | in % to the total number of enterprises, % | loss, thousand UAH |
| 2010  | -1063508,1                                  | 59,8                                       | 638378,4                 | 40,2                                       | 1701886,5          |
| 2011  | -669716,7                                   | 50,2                                       | 656990,6                 | 49,8                                       | 1326707,3          |
| 2012  | 931248,7                                    | 64,9                                       | 1294996,1                | 35,1                                       | 363747,4           |
| 2013  | 693854,6                                    | 62,9                                       | 1161438,5                | 37,1                                       | 467583,9           |
| 2014  | -1165477,5                                  | 59,4                                       | 659789,8                 | 40,7                                       | 1825267,3          |
| 2015  | -1905301,8                                  | 62,4                                       | 738692,7                 | 37,6                                       | 2643994,5          |
| 2016  | -497084,0                                   | 66,0                                       | 1080053,1                | 34,0                                       | 1577137,1          |
| 2017  | 1011197,4                                   | 72,3                                       | 1714368,1                | 27,7                                       | 703170,7           |
| 2018  | 1284373,8                                   | 71,0                                       | 1734372,1                | 29,0                                       | 449998,3           |
| 2019  | 1961959,1                                   | 70,0                                       | 2707821,2                | 30,0                                       | 745862,1           |
| 2020  | 523626,6                                    | 67,0                                       | 2194351,1                | 33,0                                       | 1670724,5          |
| 2021  | 14045,6                                     | 65,5                                       | 1242875,1                | 34,5                                       | 1228829,5          |
| 2022  | 1800753,2                                   | 68,1                                       | 3436322,4                | 31,9                                       | 1635569,2          |
| 2023  | 2782081,7                                   | 71,3                                       | 3566205,2                | 28,8                                       | 784123,5           |

As can be seen from Table 5, in 2010-2023 the dynamics of the net financial result of the Ukrainian dairy industry enterprises demonstrates a complex picture, reflecting the stages of instability, adaptation and gradual recovery of the industry. Analyzing the presented data, it can be clearly seen that in the first half of the period there was a significant dominance of unprofitability, so 2010, 2011, 2014, 2015 and 2016 ended with a negative overall financial result. The worst year was 2015, when the total loss reached almost 1.9 billion UAH, and more than a third of the enterprises worked in the red, despite the fact that more than 60% of them declared profitability – this indicates a high concentration of unprofitability among individual large players or structural problems within the sector.

Starting from 2017, the situation began to change. The gradual increase in the share of profitable enterprises, as well as the positive balance between profits and losses, indicate a gradual restoration of financial stability. In particular, in 2019, net profit reached a record for the analyzed period of 1.96 billion UAH, and in 2023 it exceeded 2.7 billion UAH despite the difficult macroeconomic situation, a full-scale war and the loss of the market part. Such an improvement was possible due to

the flexibility of enterprises, reorientation to more efficient business models, increased productivity, innovation and cost optimization.

There have also been shifts in the profitability structure, so if in 2010-2011 approximately half of the enterprises operated at a loss, then in recent years more than 70% have ended the year with a profit. This indicates a general stabilization of financial results in the dairy industry. It is worth noting that even in 2022, at first year of full-scale war, the dairy industry generally remained profitable, which confirms the adaptive potential of enterprises.

In general, during the period 2010-2023, the dairy industry of Ukraine has gone from chronic unprofitability to financial recovery. The positive dynamics of recent years forms the basis for further development, but at the same time requires strategic planning and state support to fix achievements and minimize the impact of external threats. All this once again emphasizes the relevance of strategizing the development of enterprises in the industry in a changing environment.

The dynamics of operational and overall activities profitability of Ukrainian dairy industry enterprises in 2010-2023 is shown in Figure 5.

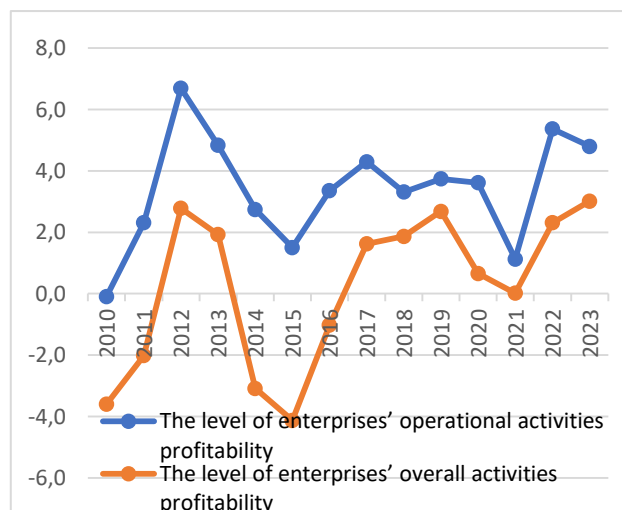


Figure 5 – The dynamics of operational and overall activities profitability of Ukrainian dairy industry enterprises in 2010-2023 (constructed by the author based on [9])

In 2010-2023, the dynamics of the profitability level of the Ukrainian dairy industry enterprises' operational and overall activities shows the gradual transformation of the industry towards stabilization and increased efficiency. Starting from 2010, when both indicators had negative values (operational profitability -0.1%, total -3.6%), the situation gradually improved. Already in 2012, operational profitability reached a peak of 6.7%, while total profitability became positive for the first time (2.8%), which meant a transition to a profitable operating model for most enterprises.

In the following years, profitability remained unstable. Thus, in 2014-2015, negative values of total profitability were again recorded, despite positive operating indicators. This may indicate the impact of non-operating expenses,

in particular, currency fluctuations, changes in the tax burden or losses from financial activities. The situation was especially critical in 2015, when total profitability decreased to

-4.1% despite positive operating at the level of 1.5%.

Since 2016, there has been a relative stabilization: both indicators have shown positive dynamics. For example, in 2017, operating profitability was 4.3%, and total – 1.6%, which confirms the return of most enterprises to a profitable model. In 2022-2023, despite military operations and a difficult external environment, Ukrainian dairy enterprises maintained a high level of operating profitability (5.4% and 4.8%, respectively), and total profitability reached 2.3% and 3.0%. This indicates the adaptability of enterprises, the ability to optimize costs and increase the efficiency of core activities even in times of crisis.

In the context of assessing the state and development trends of Ukrainian dairy enterprises, it is important to analyze foreign economic activity, in particular the volume of exports and imports of milk and dairy products. These indicators not only characterize the competitiveness of domestic products in foreign markets, but also reflect the degree of the domestic market dependence on imported raw materials or finished products. The dynamics of exports and imports of milk and dairy products for 2010-2023 are presented in Figure 6.

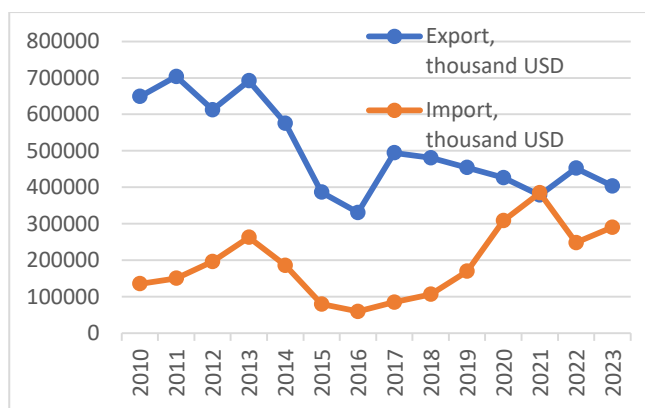


Figure 6 – Dynamics of exports and imports of milk and dairy products for 2010-2023 (constructed by the author based on [10])

During 2010-2013, exports of dairy products remained at a high level – over 600 million USD annually, reaching a peak in 2011 (703.8 million USD). This indicates significant external demand for Ukrainian dairy products and competitiveness in the international market. However, since 2014, a gradual decline has begun against the background of political instability, loss of traditional markets, as well as increased sanitary and veterinary requirements from European countries, which limited export opportunities. In 2016, exports decreased to 330.5 million USD, and then, despite minor fluctuations, did not exceed 500 million USD per year.

Imports show a different picture. Until 2015, they remained at a controlled level (mainly up to \$200 million), but since 2020, a significant increase has begun: \$308.4 million in 2020, \$384.5 million in 2021, and this

is against the background of a decrease in domestic production. This is a clear signal of a weakening of the industry's internal capacity to meet demand and increasing dependence on foreign suppliers.

The largest imbalance between exports and imports was observed in 2021, when imports exceeded exports for the first time. And although the situation partially stabilized in 2022-2023, imports remained high (\$248.2 and \$290.2 million), and exports deteriorated again.

This dynamic demonstrates that the dairy industry of Ukraine has lost part of the external markets, and also failed to fully compensate for internal consumption with its own products. All this is against the background of a long-term decrease in the number of livestock, a reduction in the number of enterprises, and a decrease in milk production. Therefore, the development strategy of enterprises must take into account not only internal challenges, but also external economic trends. Supporting exports, stimulating the modernization of production and improving quality are key areas that will allow restoring the export potential of the Ukrainian dairy industry in a changing environment.

A comprehensive study of the state and development trends of Ukrainian dairy enterprises in 2010-2023 gives grounds to assert that the industry is in a phase of deep transformation, caused by both long-term internal problems and external shocks, in particular war, loss of markets, demographic crisis and lack of resources. In these conditions, it is adaptability, the ability to renew and a strategic vision of development that determine the prospects for the effective functioning of enterprises.

One of the key limiting factors remains the degradation of the raw material base. The number of cattle, primarily cows, is systematically decreasing, so in 13 years its number has more than halved. This has directly affected the reduction in milk production volumes, which threatens the sustainability of the dairy industry's production cycles and forces enterprises to look for alternative sources of raw materials or reduce the scale of processing.

Against the backdrop of raw material shortages, the structure of the industry itself is shifting towards small and micro-enterprises, which already account for over 70% of the market. This segment, on the one hand, demonstrates high adaptability, flexibility and local resilience, but on the other hand, has limited financial, human and technological resources. While large enterprises retain only a small share, medium-sized businesses are gradually being squeezed out. Such a structural change forms a fragmented model of the industry, which complicates its strategic planning and modernization.

At the same time, the labor potential is decreasing, so the number of employed workers has almost halved, which is associated with both the general demographic situation and the decline in production. At the same time, labor productivity has increased, which indicates the technologization of production, automation of processes and more efficient use of resources. However, without proper renewal of the personnel composition and institutional support, this dynamics may be unsustainable.

Investment activity of enterprises remains volatile, with periods of sharp growth and subsequent declines. The main investments are concentrated in tangible assets, but the importance of intangible investments is growing, in particular in digital solutions, which opens up new opportunities for optimization and development. At the same time, the overall dependence of investments on the political and security situation in the country remains high.

Production and sales volumes have generally shown positive dynamics, especially in recent years, despite all external challenges. This indicates a certain resilience and ability of enterprises to adapt to the new reality. However, it is important to consider that part of this growth may be due to inflationary factors, and not exclusively to physical production volumes.

Financial indicators also show positive trends. Since 2017, the dairy industry has emerged from a phase of chronic loss-making, and most enterprises declare profits every year. At the same time, a high degree of unevenness in results remains, which requires a differentiated approach to the development of different types of enterprises.

The foreign economic activity of the Ukrainian dairy industry has experienced a noticeable decrease in efficiency. Export capacity is falling, while imports continue to grow, which indicates a decrease in the competitiveness of Ukrainian products and the risks of losing share in the domestic market.

**Conclusions.** In general, it can be concluded that the dairy industry of Ukraine needs a new approach to development strategy, focused not only on stabilization, but also on the formation of new efficiency models, investment attractiveness, export orientation and technological renewal. In this context, there is an urgent need for clear, substantiated tools for assessing the level of enterprises' development, which will allow differentiating support, planning development measures, identifying growth potential and forming a holistic policy in the industry.

#### References

1. Tvarynnystvo [Livestock]. URL: [https://www.ukrstat.gov.ua/operativ/operativ2006/sg/sg\\_rnk/sg\\_u/tvar\\_u.html](https://www.ukrstat.gov.ua/operativ/operativ2006/sg/sg_rnk/sg_u/tvar_u.html) (data zvernennia: 19.12.2024) [in Ukrainian].
2. Kil'kist' diiuchykh pidpriemstv za vydamy ekonomichnoi diial'nosti z rozpodilom na velyki, seredni, mali ta mikropidpriemstva (2010-2023) [Number of operating enterprises

- by types of economic activity with distribution into large, medium, small and micro enterprises (2010-2023)]. URL: [https://www.ukrstat.gov.ua/operativ/operativ2022/fin/fin\\_new/Kp\\_kved\\_10\\_21.xlsx](https://www.ukrstat.gov.ua/operativ/operativ2022/fin/fin_new/Kp_kved_10_21.xlsx) (data zvernennia: 19.12.2024) [in Ukrainian].
3. Kil'kist' zainiatykh pratsivnykiv u sub'iektiv hospodariuvannia za vydamy ekonomichnoi diial'nosti u 2010-2023 rokakh [Number of employed workers at economic entities by types of economic activity in 2010-2023]. URL: [https://www.ukrstat.gov.ua/operativ/operativ2022/fin/pssg/kzpsg\\_ek\\_2010\\_2021.xlsx](https://www.ukrstat.gov.ua/operativ/operativ2022/fin/pssg/kzpsg_ek_2010_2021.xlsx) (data zvernennia: 19.12.2024) [in Ukrainian].
4. Produktivnist' pratsi v pidpriemstvakh molochnoi promyslovosti za 2010-2023 rr. [Labor productivity at dairy industry enterprises for 2010-2023]. URL: [https://www.ukrstat.gov.ua/operativ/operativ2021/sg/pp\\_sgp/pp\\_sgp\\_10-23.xlsx](https://www.ukrstat.gov.ua/operativ/operativ2021/sg/pp_sgp/pp_sgp_10-23.xlsx) (data zvernennia: 19.12.2024) [in Ukrainian].
5. Kapital'ni investysii pidpriemstv za vydamy ekonomichnoi diial'nosti z rozpodilom na velyki, seredni, mali ta mikropidpriemstva (2012-2023) [Capital investments of enterprises by types of economic activity with distribution into large, medium, small and micro enterprises1 (2012-2023)]. URL: [https://www.ukrstat.gov.ua/operativ/operativ2021/fin/pdp/pdp\\_ue/kip\\_ed\\_vsmm\\_2010\\_2020ue.xlsx](https://www.ukrstat.gov.ua/operativ/operativ2021/fin/pdp/pdp_ue/kip_ed_vsmm_2010_2020ue.xlsx) (data zvernennia: 19.12.2024) [in Ukrainian].
6. Obsiah vyroblenoi produktsii (tovariv, posluh) sub'iektiv hospodariuvannia molochnoi promyslovosti Ukrainy u 2013-2023 rokakh [Volume of produced goods (products, services) of economic entities of the dairy industry of Ukraine in 2013-2023]. URL: [https://www.ukrstat.gov.ua/operativ/operativ2021/fin/pdp/pdp\\_ue/o\\_vpp\\_vsmm\\_2012-2020\\_ue.xlsx](https://www.ukrstat.gov.ua/operativ/operativ2021/fin/pdp/pdp_ue/o_vpp_vsmm_2012-2020_ue.xlsx) (data zvernennia: 19.12.2024) [in Ukrainian].
7. Obsiah realizovanoi produktsii (tovariv, posluh) sub'iektiv hospodariuvannia za vydamy ekonomichnoi diial'nosti (2010-2023) [Volume of sold goods (products, services) of economic entities by types of economic activity (2010-2023)]. URL: [https://www.ukrstat.gov.ua/operativ/operativ2022/fin/pssg/orpsg\\_ek\\_2010\\_2021\\_ue.xlsx](https://www.ukrstat.gov.ua/operativ/operativ2022/fin/pssg/orpsg_ek_2010_2021_ue.xlsx) (data zvernennia: 19.12.2024) [in Ukrainian].
8. Chystyi prybutok (zbytok) pidpriemstv za vydamy ekonomichnoi diial'nosti z rozpodilom na velyki, seredni, mali ta mikropidpriemstva (2010-2023) [Net profit (loss) of enterprises by types of economic activity with distribution into large, medium, small and micro enterprises (2010-2023)]. URL: [https://www.ukrstat.gov.ua/operativ/operativ2021/fin/fin\\_new/chpr\\_ek\\_vsmm\\_2010\\_2020\\_ue.xlsx](https://www.ukrstat.gov.ua/operativ/operativ2021/fin/fin_new/chpr_ek_vsmm_2010_2020_ue.xlsx) (data zvernennia: 19.12.2024) [in Ukrainian].
9. Rentabel'nist' operatsiinoi ta usiei diial'nosti pidpriemstv za vydamy ekonomichnoi diial'nosti z rozpodilom na velyki, seredni, mali ta mikropidpriemstva (2010-2023) [Profitability of operating and overall activities of enterprises by types of economic activity with distribution into large, medium, small and micro enterprises (2010-2023)]. URL: [https://www.ukrstat.gov.ua/operativ/operativ2021/fin/fin\\_new/rodp\\_ek\\_vsmm\\_2010\\_2020\\_ue.xlsx](https://www.ukrstat.gov.ua/operativ/operativ2021/fin/fin_new/rodp_ek_vsmm_2010_2020_ue.xlsx) (data zvernennia: 19.12.2024) [in Ukrainian].
10. Tovarna struktura zovnishn'oi torhivli Ukrainy [Commodity structure of foreign trade of Ukraine]. URL: [https://www.ukrstat.gov.ua/operativ/operativ2025/zd/tsztt/arh\\_tszt2\\_025\\_u.html](https://www.ukrstat.gov.ua/operativ/operativ2025/zd/tsztt/arh_tszt2_025_u.html) (data zvernennia: 19.12.2024) [in Ukrainian].

Received 17.04.2025

#### Відомості про авторів / About the Authors

**Маслак Марія Володимирівна (Maslak Mariya)** – доктор економічних наук, доцент, професорка кафедри маркетингу, Національний технічний університет «Харківський політехнічний інститут»; м. Харків, Україна; ORCID: <https://orcid.org/0000-0002-3322-740X>; e-mail: [mariya.maslak@khpi.edu.ua](mailto:mariya.maslak@khpi.edu.ua)

**Фощій Марія Дмитрівна (Foshchii Mariia)** – старший викладач кафедри менеджменту, Національний технічний університет «Харківський політехнічний інститут»; м. Харків, Україна; ORCID: <https://orcid.org/0000-0003-1555-3110>; e-mail: [mariia.foshchii@khpi.edu.ua](mailto:mariia.foshchii@khpi.edu.ua)