Chapter 4
Regional and Sectoral Enterprise Competitiveness in the Context of Economic Sustainability and Resilience

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Abstract: *The research objective of this chapter is to assess the competitiveness of Moldovan enterprises at the mesoeconomic level. The novelty of this work lies in the development of two new composite indices: the Sectoral Enterprise Competitiveness Index, comprising 24 indicators grouped into six pillars, and the Regional Enterprise Competitiveness Index, comprising 26 indicators grouped also into six pillars: Business structure and scale, Entrepreneurial base, and labour engagement, Productivity and resource efficiency, Financial results and profitability, Financial stability and capital structure, and Growth dynamics and intangible potential. The application of these indices to the analysis of regional and sectoral disparities revealed that the business sector in districts near customs checkpoints with the heaviest international freight traffic is the most competitive. In contrast, districts located away from major trade flows face challenges, such as low enterprise productivity and efficiency, and deteriorating infrastructure. The developed indices identify key institutional, structural, technological, and financial barriers. An analysis of enterprise competitiveness by sector of the national economy revealed that the lowest competitiveness was observed among enterprises in Sector D: Electricity, Gas, Steam, and Air Conditioning Supply. During the COVID-19 pandemic lockdown, the competitiveness of enterprises in Sector I: Accommodation and Food Service Activities significantly declined. However, in 2020, the competitiveness of enterprises in Sector N: Public Administration and Defense, Compulsory Social Security increased significantly. Sector J:*

Information and Communication is one of the most competitive sectors of the national economy, so this chapter proposes tools for enhancing regional resilience through digital transformation.
Keywords**:** *enterprise competitiveness, regional development, composite index, economic sustainability, productivity, financial stability, digital transformation.*

Introduction

In 2022, Moldova became a candidate for European Union membership. Therefore, in the coming years, it is necessary to harmonize Moldova's legislation with the European Union (EU) legislation and to increase the competitiveness of Moldovan enterprises so they can compete with the European Union's entrepreneurship sector. After the proclamation of independence, Moldova, in its economic development, went through a period of deindustrialization, caused by the severance of production and cooperation ties with producers from the CIS (Commonwealth of Independent States) countries. As a consequence, the industry's share of GDP (Gross Domestic Product) has decreased crucially from 39% in 1993 to 8% in 2024. Over the past 35 years, the flows of commodities and services have gradually been reoriented from the CIS market to the EU market.

However, in this market, the standards for merchandise differ substantially from the standards applied in Moldova, and competition is much fiercer in the EU. Therefore, assessing the competitiveness of enterprises and elaborating a competitiveness index that accounts for the specifics of Moldovan entrepreneurship has become a vital necessity for the country's European path. The relevance of this research lies in the large gap in enterprise competitiveness across sectors of the national economy. The disproportionate development of the economy poses a considerable barrier to improving the country's economic sustainability. Qualified personnel and investments are driving forces of enterprises' competitiveness. However, in Moldova, due to the low standard of living and limited prospects, an upward trend in the exodus of the young and able-bodied population has emerged. As a result, demographic aging is taking place. The

reduction in population leads to a decrease in both the workforce and the number of consumers, i.e., to a constraint of the local market. Businesses are struggling to find qualified personnel, and potential investors are not interested in districts where the population exodus was most severe.

The novelty and purpose of this chapter are to develop the composite index of enterprise competitiveness. Determining the impact factors of competitiveness to establish the result indicators is one of the research objectives. Another objective is to estimate the competitiveness of enterprises at the regional and sectoral levels of the national economy, in the context of determining the main challenges (access to financing, innovation) and identifying regional competitive advantages (resources, human capital, infrastructure).

Theoretical aspects and literature review

Scientific and technological progress influences not only the development of applied technologies, production, and the economy, but also the theoretical aspects of fundamental economic concepts. The concept of competitiveness has also undergone significant evolution. As a result of the fourth industrial revolution, the list of factors influencing competitiveness has expanded. In addition to traditional factors (resource costs, productivity), these have been supplemented by the following: innovation potential, stability, business adaptability, the ability to implement advanced technologies, and the degree of digitalization of production. These factors, particularly digitalization, are also notable for Moldova (Bickauske et al., 2021)[107].

In recent years, several versions of the enterprise competitiveness index have been developed (Table 4.1), but none of these indices count the distinctive characteristics of the Moldovan entrepreneurship sector. Only one index accounts for Moldova's specifics, but it was designed to assess SMEs (Small and Medium-sized Enterprises)

[107] Bickauske, D., Bickauske, D., Simanaviciene, Z., Sergiienko, L., & Baranovska, T. (2021). Digital transformation as a factor of ensuring country competitiveness: Moldova case analysis. *Independent Journal of Management & Production, 12*(6). https://doi.org/10.14807/ijmp.v12i6.1779

competitiveness (Gutium, 2025)[108]. A comparative analysis revealed that these indices differ both in the indicators they include and in the pillars in which these indicators are grouped.

Table 4.1. Comparative analysis of the Enterprise Competitiveness Indices

Authors, source	Pillars	Number of indicators	Limitation
Huang, P.-Y., Wu, C.-H., Huang, Y.-S., Chang, X., Yan, L., & Sun, X. (Huang et al., 2026)[109]	Productivity, Beneficialness, Image, Stability, Growth	16	This index does not take into account business structure and scale, the allocation or misallocation index, and intangible potential.
Kao, C., Wu, W.-Y., Chang, W.-S., Liu, S.-T., Huang, C.-H., Huang, Y.-S., Wu, C.-H., Li, D.-C., & Wang, I.-L. (Kao et al., 2025)[110]	Productivity, Profitability, Image, Stability, Growth	19	This index does not take into account enterprise density, the diversification index, the allocation or misallocation index, intangibles intensity, and the CAGR (Compound Annual Growth

[108] Gutium, T. G. (2025). Measuring and mapping the competitiveness of small and medium enterprises at the district level: evidence from Moldova. *Information and Innovations, 20*(1), 5-15. https://doi.org/10.31432/1994–2443.2025.01

[109] Huang, P.-Y., Wu, C.-H., Huang, Y.-S., Chang, X., Yan, L., & Sun, X. (2026). A survey of enterprise competitiveness for listed companies in Singapore. *Asia Pacific Management Review, 31*(1), 100388. https://doi.org/10.1016/j.apmrv.2025.100388

[110] Kao, C., Wu, W.-Y., Chang, W.-S., Liu, S.-T., Huang, C.-H., Huang, Y.-S., Wu, C.-H., Li, D.-C., & Wang, I.-L. (2025). A business function approach for measuring enterprise competitiveness: An illustration with Taiwanese listed companies. *Asia Pacific Management Review, 30*(3), 100369. https://doi.org/10.1016/j.apmrv.2025.100369

			Rate) of intangibles.
Ivanova, M., Varyanichenko, O., Sannikova, S., & Faizova, S. (Ivanova et al., 2018)[111]	Competitiveness of supply process, Competitiveness of production process, Competitiveness of sales process	20	Although the number of indicators is comparatively greater, the number of pillars is smaller, and not all competitiveness parameters are included. There are no indicators that reflect the business's structure and scale, growth dynamics, and sustainable potential.
Poufinas, T., Galanos, G., & Papadimitriou, P. (Poufinas et al., 2018)	3 pillars: Compete, Connect, Change 3 levels: Firm capabilities, Immediate business environment, National environment	8	In calculating this index, macro indicators are mainly used, although only SMEs' competitiveness is assessed, and there are no indicators specific to enterprises' activities.

Source: author's systematization

A common drawback of all the listed indices is the presence of *hidden double-counting and multicollinearity*. For example, in calculating the SME competitiveness index, T. Poufinas et al. included indicators such as Population, GDP, and GDP per capita in the

[111] Ivanova, M., Varyanichenko, O., Sannikova, S., & Faizova, S. (2018). Assessment of the competitiveness of enterprises. *Economic Annals-XXI, 173*(9-10), 26-31. https://doi.org/10.21003/ea.V173-04

algorithm. Another pair of hidden double-counting indicators is Return on Assets (ROA) and Return on Equity (ROE). This pair of indicators is present in the index elaborated by M. Ivanova et al. Another pair of hidden double-counting indicators was identified in the indices developed by Po-Yao Huang et al. and by Chiang Kao et al., such as gross profit margin and net profit margin. These pairs of indicators were included not only in the same index but also in the same pillar. Their presence introduces bias into the index toward the characteristic reflected by these indicators. Other pairs of hidden double-counting indicators were also found in the listed indices. All identified shortcomings were taken into account in developing the Enterprise Competitiveness Index presented in this chapter.

Methodological concept and tools for assessing competitiveness

A new composite index (ECI – Enterprise Competitiveness Index) was developed and used to conduct an in-depth analysis of enterprise competitiveness at the sectoral and Administrative-Territorial Unit (ATU) levels. This index is based on a methodology adapted to Moldova's specific characteristics. The index structure is presented in Table 4.2. The ECI comprises six pillars, with 26 indicators by region and 24 by sector. All indicators are calculated using available data from the National Bureau of Statistics (NBS).

The first pillar, "Business structure and scale," reflects the competitive position of enterprises in terms of structure. According to the NBS, Moldova has seen a downward trend in the number of medium-sized enterprises and an increase in microenterprises in recent years. The number of medium-sized enterprises decreased by 68, while the number of microenterprises increased by 8,788 between 2021 and 2024 (National Bureau of Statistics of the Republic of Moldova, n.d.). The smaller the enterprise, the less opportunity it has to invest in innovation and advanced technologies. Large and medium-sized enterprises have the greatest opportunities, so three of the five indicators (Enterprise size ratio, Index of relative size of medium-sized enterprises, Sales revenue share of medium-sized enterprises) answer the question "To what extent do medium-sized enterprises hold a significant and strong position in the economic structure?". To ensure that the first pillar reflects the fragmentation and scalability of

the entrepreneurship sector, two more indicators were added to the three already mentioned (Diversification index, Enterprise density).

Table 4.2. Structure of the Enterprise Competitiveness Index

Pillar (*P*)	Indicators (*X*)	Type of correlation
Business structure and scale	Enterprise size ratio (medium vs. small and micro)	↑
	Index of relative size of medium-sized enterprises (by employment)	↑
	Sales revenue share of medium-sized enterprises	↑
	Diversification index	↑
	Enterprise density per 1,000 inhabitants	↑
Entrepreneurial base and labour engagement	Employment share in medium-sized enterprises	↑
	Compound Annual Growth Rate (CAGR) of employment (3-year)	↑
	Average number of employees per enterprise	↑
	Enterprise employment per 1,000 inhabitants	↑
Productivity and resource efficiency	Relative productivity ratio of medium-sized enterprises to small and micro enterprises	↑
	Sales to labor cost ratio	↑
	Capital to labor cost ratio	↑
	Operating expense ratio	↓
	Misallocation index	↓
Financial results and profitability	Operating profit margin	↑
	Return on Equity (ROE)	↑
	Share of profitable enterprises	↑
	Share of enterprises without sales	↓
Financial stability and capital structure	Financial autonomy ratio	↑
	Ratio of financial investments to total assets	↑

	Current debt ratio	↓
	Financial leverage (debt to equity ratio)	↓
Growth dynamics and intangible potential	Intangibles intensity	↑
	CAGR of intangible share (3-year)	↑
	CAGR of average revenue per enterprise (3-year)	↑
	Employment elasticity of sales (3-year)	↓

Source: author's elaboration

The depth of the entrepreneurial base and labor engagement is assessed using the second pillar. The indicators in this pillar answer the question, "How many people are involved in entrepreneurship and how broad is this sector?" One of the goals we pursued in developing this pillar was to quantify employee-level business activity and assess engagement. The indicator "Enterprise employment per 1000 inhabitants" shows the extent to which the population is actually involved in the entrepreneurship sector.

The third pillar is the "core" of competitiveness and answers the question, "How efficiently are resources used?" Using the indicators of this pillar, one can assess whether competitiveness results from high productivity or is achieved solely through an increase in resource volumes, i.e., through an extensive approach.

The fourth pillar reflects the viability of enterprises and answers the question, "Are enterprises profitable?" Since there are cases where, despite high productivity, an enterprise's net profit volume is insignificant or zero, indicating structural problems in the market or price pressure, the main purpose of the indicators in this pillar is to assess enterprises' real competitiveness.

A fifth pillar was developed to assess enterprises' financial stability. The indicators of this pillar reflect the degree to which enterprises are independent of external debt and the balance of their capital structure. Two of the four indicators in this pillar reflect capital structure (Financial autonomy ratio and financial leverage). This pillar answers the question, "How financially resilient is the enterprise to

risks and shocks?"

The sixth pillar assesses enterprises' long-term competitiveness. It reflects the intensity of expansion and answers the question, "Has the enterprise created a foundation for future growth, or is its competitiveness merely short-term?" Growth can be assessed in various ways. The Compound Annual Growth Rate (CAGR) was chosen because it smooths out volatility and makes indicators comparable, while the classic growth rate is sensitive to fluctuations and crises.

We followed the causal chain described in Figure 4.1 in developing the ECI.

Figure 4.1. The causal chain of the new Enterprise Competitiveness Index

Since the units of measurement for all 26 indicators are not identical, they must ***first*** be normalized. Each indicator is normalized separately for each year across districts or sectors. For indicators with a positive impact, the following formula was used:

$$\tilde{X}_{(+)} = \frac{x - x_{\min}}{x_{\max} - x_{\min}}, \tag{4.1}$$

In case of indicators with a negative impact, the following formula was used:

$$\tilde{X}_{(-)} = \frac{x_{\max} - x}{x_{\max} - x_{\min}}, \tag{4.2}$$

where: x – original value,

x_{max} – the maximum value of the indicator x,

x_{min} – the minimum value of the indicator x,

$\tilde{\tilde{X}}$ – normalized value.

In ***the second stage***, the pillar values (P) are calculated as the arithmetic mean of the indicators comprising each pillar.

$$P = \frac{\sum_{j=1}^{n} \tilde{\tilde{X}}_j}{n}, \tag{4.3}$$

In ***the third stage***, the ECI is determined as the arithmetic mean of the six pillars.

$$ECI = \frac{\sum_{i=1}^{6} P_i}{6}, \tag{4.4}$$

where: P_i – pillar (sub-index) i of enterprise competitiveness.

Sectoral Enterprise Competitiveness Index: estimation, challenges and advantages

The Sectoral Enterprise Competitiveness Index (SECI) consists of 24 indicators. It has two indicators fewer than the regional index.

Table 4.3. Sectoral Enterprise Competitiveness Index, Pillar 1. Business structure and scale

Sectors	2018	2019	2020	2021	2022	2023	2024
A: Agriculture, Forestry, and Fishing	0.5070	0.5221	0.5181	0.4348	0.4480	0.4872	0.5044
B: Mining and Quarrying	0.7047	0.5963	0.5187	0.5287	0.5526	0.5813	0.5865
C: Manufacturing	0.3507	0.3067	0.3037	0.3233	0.3256	0.3506	0.3940
D: Electricity, Gas, Steam, and Air Conditioning Supply	0.0385	0.0401	0.0212	0.0703	0.0495	0.0720	0.1172

E: Water Supply, Sewerage, Waste Management, and Remediation Activities	0.3905	0.3400	0.3639	0.3265	0.4456	0.5160	0.5597
F: Construction	0.4554	0.4209	0.4153	0.4410	0.4584	0.5115	0.5062
G: Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	0.3447	0.3376	0.3308	0.3447	0.3394	0.3641	0.3784
H: Transportation and Storage	0.4119	0.3982	0.4040	0.3588	0.3558	0.3803	0.4158
I: Accommodation and Food Service Activities	0.4808	0.4781	0.4806	0.4331	0.4220	0.4457	0.4961
J: Information and Communication	0.3053	0.3461	0.3408	0.3727	0.4088	0.4360	0.4709
K: Financial and Insurance Activities	0.1879	0.3252	0.3246	0.3839	0.3940	0.3695	0.4170
L: Real Estate Activities	0.4794	0.4562	0.4907	0.4731	0.4784	0.4525	0.4968
M: Professional, Scientific, and Technical Activities	0.4943	0.5084	0.4979	0.4767	0.4964	0.4637	0.4936
N: Administrative and Support Service Activities	0.4373	0.4370	0.4743	0.3927	0.3841	0.4123	0.4517
O: Public	0.000	0.262	0.256	0.250	0.250	0.250	0.250

Administration and Defense, Compulsory Social Security	0	5	9	0	0	0	0
P: Education	0.3314	0.6167	0.5717	0.4897	0.5084	0.5830	0.5728
Q: Human Health and Social Work Activities	0.4904	0.4163	0.3896	0.3604	0.3848	0.4666	0.4776
R: Arts, Entertainment and Recreation	0.6310	0.4705	0.3948	0.1834	0.1949	0.2018	0.2168
S: Other Service Activities	0.5250	0.5498	0.5022	0.5119	0.4587	0.5049	0.5103

Source: author's calculation

This index does not include indicators that relate solely to the regional aspect of enterprise competitiveness, such as Enterprise density per 1,000 inhabitants and Enterprise employment per 1,000 inhabitants. The dynamics of competitiveness in terms of business structure and scale ***(Pillar 1)*** are reflected in Table 4.3.

The highest level of consolidation was recorded in 2018, 2021, 2022, and 2024 for Sector B: Mining and Quarrying. This is due to the industry's capital intensity. For sand, crushed stone, and rubble extraction to be competitive, it should be carried out by larger enterprises than micro-enterprises due to the high cost of equipment.

Sector D: Electricity, Gas, Steam, and Air Conditioning Supply has the lowest level of competitiveness in terms of business structure and scale. This sector recorded the lowest level of diversification in 2024 (0.1416) and the largest increase in the number of microenterprises from 2018 to 2024 (by 6.3 times). This industry is also capital-intensive, and as noted above, microenterprises do not have the same investment opportunities as medium-sized and large enterprises. The presence of a large number of microenterprises in this sector will lead to higher electricity prices due to the increase in the number of operators, each of whom adds a trade markup to the price without creating additional kilowatts. Energy prices are rising due to higher

purchase prices on the European market. Moldova is integrating into the European market and purchasing energy resources there.

An analysis of ***Pillar 2*** of the SECI (Table 4.4) revealed profound structural imbalances in the national economy. A paradoxical situation has emerged in Moldova. The real sector, which should underpin growth (manufacturing and agriculture), is losing competitiveness, while the public sector is performing strongly. The competitiveness of the entrepreneurial base and labor engagement in Sector C: Manufacturing has halved (from 0.5340 in 2018 to 0.2493 in 2024). Concomitantly, this kind of competitiveness in Sector O: Public Administration and Defense, Compulsory Social Security has increased sixfold (from 0.1253 in 2018 to 0.7633 in 2024) and in Sector P: Education has increased twofold (from 0.2160 in 2018 to 0.4332 in 2024).

The value of this sub-index (Pillar 2) indicates labor force engagement. Although the sector J: Information and Communication recorded high values for this sub-index, thanks to the expansion of incentives within the Moldova IT Park (Moldova Innovation Technology Park), this sub-index declined in 2024, indicating the exhaustion of extensive growth factors and increased competition for qualified personnel. The sector I: Accommodation and Food Service Activities was heavily affected during the COVID-19 pandemic lockdown. However, in the following years, it recovered relatively quickly, focused on domestic tourism, and adapted to new market conditions, using digital tools to promote its services. The manufacturing industry has experienced a deep recession, posing a major challenge to the economy's competitiveness and the country's sustainable development. The decline in the competitiveness of the entrepreneurial base and labor engagement in Sector C: Manufacturing reflects deindustrialization, rising production costs driven by increasing gas and electricity prices, and a loss of competitive advantages in domestic and foreign markets.

The decline in this kind of competitiveness in Sector A: Agriculture, Forestry, and Fishing is due to low productivity, frequent climate shocks, and an ineffective entrepreneurial base, which consists predominantly of small and micro-farms. Sector F: Construction has

recorded an annual decline in labor engagement due to the outflow of skilled workers abroad. The CAGR of employment (3-year) was negative in the construction sector for 2022-2024.

Table 4.4. Sectoral Enterprise Competitiveness Index, Pillar 2. Entrepreneurial base and labour engagement

Sectors	2018	2019	2020	2021	2022	2023	2024
A: Agriculture, Forestry, and Fishing	0.3613	0.2662	0.3105	0.2400	0.2907	0.3107	0.2504
B: Mining and Quarrying	0.4715	0.4191	0.3913	0.4221	0.4263	0.3485	0.3327
C: Manufacturing	0.5340	0.3490	0.3366	0.2674	0.3020	0.2739	0.2493
D: Electricity, Gas, Steam, and Air Conditioning Supply	0.3900	0.3495	0.3893	0.3751	0.3465	0.2993	0.2395
E: Water Supply, Sewerage, Waste Management, and Remediation Activities	0.4791	0.3847	0.4617	0.4367	0.4332	0.4146	0.4500
F: Construction	0.3466	0.3273	0.3228	0.3091	0.2946	0.2566	0.2068
G: Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	0.3222	0.2134	0.2200	0.1623	0.1982	0.1908	0.1540
H: Transportation and Storage	0.3277	0.2006	0.2257	0.1678	0.1832	0.2083	0.1720
I: Accommodation and Food Service Activities	0.3958	0.3092	0.2021	0.1158	0.1871	0.4408	0.4804
J: Information and Communication	0.3945	0.3375	0.3386	0.3478	0.4761	0.4696	0.3322
K: Financial and Insurance Activities	0.3049	0.1943	0.1808	0.1099	0.2106	0.1364	0.0907
L: Real Estate	0.1665	0.0817	0.1632	0.0804	0.1244	0.1300	0.1099

Activities							
M: Professional, Scientific, and Technical Activities	0.2236	0.1465	0.0983	0.0722	0.1063	0.2024	0.1583
N: Administrative and Support Service Activities	0.4871	0.3762	0.2993	0.2184	0.2530	0.3419	0.3586
O: Public Administration and Defense, Compulsory Social Security	0.1253	0.8048	0.7643	0.9845	0.6509	0.7642	0.7633
P: Education	0.2160	0.6501	0.7211	0.7409	0.5248	0.5198	0.4332
Q: Human Health and Social Work Activities	0.4535	0.3714	0.4573	0.4273	0.5149	0.5111	0.4442
R: Arts, Entertainment and Recreation	0.4096	0.3833	0.4501	0.3711	0.4411	0.5802	0.5343
S: Other Service Activities	0.4045	0.3020	0.1940	0.0615	0.0729	0.2321	0.2105

Source: author's calculation

An analysis of resource efficiency in Moldova (***Pillar 3*** of the SECI) revealed that economic sectors are highly sensitive to both external and internal shocks. The main constraints to improving resource efficiency include the small size of the domestic market, intense competition in the EU market (one of the main sales markets), and the low competitiveness of exported products in this market. The dynamics of resource productivity and efficiency in sector A: Agriculture, Forestry, and Fishing are characterized by high volatility (Table 4.5). Years of decline (2019, 2020, 2022, 2024) alternate with years of growth (2018, 2021, 2023).

This volatility reflects the agricultural sector's low adaptive capacity. The main cause is the degradation of irrigation systems, a large part of which were not modernized or restored during the country's independence. Another reason for the low level of adaptability is the country's loss of its former position in the seed

breeding and seed production sector. Moldova is an agricultural country and used to specialize in breeding and producing seeds for sowing, exporting them to other markets. However, due to protectionist policies in European countries, the country lost its role as an exporter of seeds for sowing and has increasingly come to rely on imports of such seeds.

Table 4.5. Sectoral Enterprise Competitiveness Index, Pillar 3. Productivity and resource efficiency

Sectors	2018	2019	2020	2021	2022	2023	2024
A: Agriculture, Forestry, and Fishing	0.3536	0.2873	0.2962	0.4244	0.4098	0.4279	0.3136
B: Mining and Quarrying	0.3890	0.2840	0.2937	0.4973	0.5157	0.4814	0.4468
C: Manufacturing	0.3509	0.2688	0.3030	0.3739	0.3994	0.4531	0.3535
D: Electricity, Gas, Steam, and Air Conditioning Supply	0.4879	0.5612	0.5117	0.4025	0.3390	0.4089	0.3264
E: Water Supply, Sewerage, Waste Management, and Remediation Activities	0.2452	0.1712	0.1515	0.2056	0.2782	0.4391	0.2842
F: Construction	0.4222	0.2325	0.3277	0.4073	0.4217	0.5139	0.3878
G: Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	0.5835	0.3009	0.4295	0.4550	0.4650	0.5522	0.4339
H: Transportation and Storage	0.3977	0.3204	0.3260	0.3483	0.3978	0.4798	0.3894
I: Accommodation and Food Service Activities	0.3756	0.2876	0.3429	0.4276	0.4971	0.5019	0.4416
J: Information and Communication	0.3153	0.2324	0.3038	0.4271	0.4547	0.4957	0.3973

K: Financial and Insurance Activities	0.4214	0.1822	0.2945	0.4509	0.4737	0.4593	0.4944
L: Real Estate Activities	0.4397	0.3006	0.3731	0.5645	0.5641	0.4747	0.4959
M: Professional, Scientific, and Technical Activities	0.3031	0.2400	0.2937	0.4357	0.4979	0.4945	0.4182
N: Administrative and Support Service Activities	0.2503	0.1933	0.2377	0.2233	0.2715	0.3786	0.2796
O: Public Administration and Defense, Compulsory Social Security	0.5046	0.5000	0.6799	0.5374	0.4392	0.4044	0.4000
P: Education	0.3765	0.3143	0.3665	0.2967	0.3324	0.4741	0.3025
Q: Human Health and Social Work Activities	0.3595	0.2952	0.3641	0.4321	0.4111	0.4990	0.3681
R: Arts, Entertainment and Recreation	0.2796	0.1452	0.0509	0.1614	0.1879	0.2570	0.1328
S: Other Service Activities	0.3046	0.2233	0.3861	0.4340	0.4377	0.5222	0.4220

Source: author's calculation

In terms of resource efficiency, Sector C: Manufacturing ranks 13th out of 19. The main reason is low added value. The share of capital goods in the Moldovan industry is very low, while the share of consumer goods is very high. The energy crisis and the high tariff on energy resources have led to higher costs for manufactured and exported products and reduced efficiency. The disruption of supply chains is another reason for the sector's declining efficiency. A solution to this situation is to reduce the energy intensity of production, but this requires investment.

In 2024, the highest productivity and resource efficiency levels were recorded by the sectors L: Real Estate Activities and K: Financial and Insurance Activities. However, these sectors do not create

material wealth, so their high efficiency cannot be extrapolated to the real sector. The banking sector, although damaged by the billion-dollar theft, recovered thanks to state support. This support will continue in 2026. While previously it was possible to pay electricity and other utility bills at the post office, this can now only be done at banks, which charge a commission. Alternatively, you need to open a bank account, get a Visa card, and then use internet banking. This solution is very beneficial for banks and will continue to improve their efficiency, but it is disadvantageous for pensioners, who are unfamiliar with new digital technologies. An in-depth analysis revealed that excess liquidity, not allocated to investment lending in the real sector, is a barrier to the greater competitiveness of both the real sector and the national economy. Previous studies have found that SMEs have low access to credit (Gutium & Speian, 2022)[112].

Table 4.6. Sectoral Enterprise Competitiveness Index, Pillar 4. Financial results and profitability

Sectors	2018	2019	2020	2021	2022	2023	2024
A: Agriculture, Forestry, and Fishing	0.5184	0.4484	0.4488	0.8194	0.6545	0.3694	0.4139
B: Mining and Quarrying	0.3439	0.5273	0.8281	0.5744	0.5608	0.4463	0.4545
C: Manufacturing	0.3688	0.3461	0.6325	0.4728	0.5138	0.4268	0.4576
D: Electricity, Gas, Steam, and Air Conditioning Supply	0.2335	0.1444	0.2891	0.0908	0.0433	0.1141	0.0701
E: Water Supply, Sewerage, Waste	0.4186	0.2727	0.6593	0.3429	0.3275	0.3220	0.3666

[112] Gutium, T., & Speian, O. (2022). Access to finance by Moldovan small and medium enterprises: main obstacles and solutions. *The Journal Contemporary Economy*, *7*(3), 97-108.

Management, and Remediation Activities							
F: Construction	0.5486	0.5017	0.7125	0.5149	0.5256	0.4859	0.4739
G: Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	0.4029	0.3926	0.6198	0.4981	0.5229	0.4311	0.4423
H: Transportation and Storage	0.3737	0.3611	0.6088	0.4269	0.5854	0.4902	0.4662
I: Accommodation and Food Service Activities	0.3086	0.4323	0.1243	0.4889	0.6704	0.6470	0.6082
J: Information and Communication	0.4399	0.4474	0.7472	0.6039	0.6617	0.6132	0.6284
K: Financial and Insurance Activities	0.5696	0.7242	0.7505	0.7095	0.7759	0.7005	0.6918
L: Real Estate Activities	0.4587	0.4756	0.6695	0.5824	0.5808	0.5570	0.5668
M: Professional, Scientific, and Technical Activities	0.6591	0.6636	0.9043	0.8136	0.8562	0.7922	0.7736
N: Administrative and Support Service Activities	0.4408	0.4604	0.5487	0.5432	0.6773	0.5951	0.5621
O: Public Administration and Defense, Compulsory Social Security	0.3846	0.1071	0.4126	0.0329	0.2270	0.0260	0.0000
P: Education	0.2415	0.3729	0.5905	0.2814	0.3773	0.3663	0.3958
Q: Human Health and	0.4702	0.6492	0.7124	0.5956	0.5960	0.6142	0.6491

Social Work Activities							
R: Arts, Entertainment and Recreation	0.1161	0.2201	0.1244	0.3002	0.4051	0.3792	0.3908
S: Other Service Activities	0.4363	0.4350	0.5358	0.5667	0.5800	0.6315	0.6343

Source: author's calculation

The lowest level of financial results and profitability (***Pillar 4***) in 2024 was recorded by the sectors O: Public Administration and Defense, Compulsory Social Security, and D: Electricity, Gas, Steam, and Air Conditioning Supply (Table 4.6).

The implementation of the Third Energy Package and the purchase of energy resources from the EU (itself an energy importer) inevitably affected the financial results and profitability in sector D.

The Moldovan government decided to partially compensate the population for increased energy tariffs during the heating season (Ministry of Labor and Social Protection, 2023)[113]. This policy led to tariff deviations and cash flow gaps. Since the beginning of 2026, all compensation has been cancelled, indicating that the value of this pillar will increase this year.

The agricultural sector's profitability dynamics are highly volatile. Favorable weather conditions in 2021 resulted in a bumper crop and the highest Return on Sales (ROS) and Return on Equity (ROE) for the period under review (23.14% and 30.79%, respectively). However, subsequent years have exposed the sector's structural vulnerabilities. The main factors that led to ROS and ROE being lower in 2023 and 2024 are the rising energy prices, the purchase of energy resources by importing companies during periods of peak prices, disruption of established supply chains, abandonment of traditional market in

[113] Ministry of Labor and Social Protection. (2023). *Notă informativă cu privire la volumele maxime și prețurile compensate la energie pentru perioada noiembrie 2023–martie 2024* [Information note on maximum volumes and compensated energy prices for November 2023–March 2024]. https://social.gov.md/wp-content/uploads/2023/11/Nota-informativa-privind-programul-de-compensatii-%E2%80%9EAjutor-la-contor-sezonul-2023-2024.pdf

Russia, and the reorientation of commodity flows to the EU market, where applies stricter regulatory standards than those use in the markets of CIS countries.

The lowest level of financial stability (***Pillar 5***) was achieved in 2024 by sectors S, D, E and N. Analysis of the dynamics of financial stability and capital structure showed that the largest decline for 2018-2024 was recorded by the following sectors E: Water Supply, Sewerage, Waste Management, and Remediation Activities (by 3.4 times), S: Other Service Activities (by 2.7 times), P: Education (by 2.5 times), D: Electricity, Gas, Steam, and Air Conditioning Supply (by 2.1 times), N: Administrative and Support Service Activities (by 2.0 times) (Table 4.7).

According to the OECD report, "the water supply and sanitation (WSS) sector is financially unsustainable" (Organisation for Economic Co-operation and Development, 2017)[114]. But according to our results, the financial autonomy rate of sector E was above 0.5 in 2018, indicating high sustainability, and fell to 0.3 (an acceptable level) in 2024. In our country, some sectors have a lower financial autonomy rate than sector E.

Table 4.7. Sectoral Enterprise Competitiveness Index, Pillar 5. Financial stability and capital structure

Sectors	2018	2019	2020	2021	2022	2023	2024
A: Agriculture, Forestry, and Fishing	0.4790	0.4477	0.5168	0.5518	0.4939	0.4834	0.4107
B: Mining and Quarrying	0.7647	0.7681	0.8175	0.7901	0.7628	0.6961	0.6733
C: Manufacturing	0.5301	0.5124	0.5718	0.5514	0.4850	0.5334	0.5582
D: Electricity,	0.2516	0.1960	0.3104	0.1759	0.2655	0.2800	0.1207

[114] Organisation for Economic Co-operation and Development. (2017). *Improving domestic financial support mechanisms in Moldova's water and sanitation sector*. https://www.oecd.org/en/publications/improving-domestic-financial-support-mechanisms-in-moldova-s-water-and-sanitation-sector_9789264252202-en.html

Gas, Steam, and Air Conditioning Supply							
E: Water Supply, Sewerage, Waste Management, and Remediation Activities	0.5296	0.4887	0.5825	0.5288	0.2902	0.2030	0.1549
F: Construction	0.4319	0.3752	0.5119	0.4520	0.3941	0.3442	0.2980
G: Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	0.4053	0.4383	0.5497	0.5104	0.5108	0.5319	0.5102
H: Transportation and Storage	0.5421	0.5805	0.6079	0.5772	0.5301	0.4926	0.4389
I: Accommodation and Food Service Activities	0.1992	0.1560	0.1046	0.1442	0.3046	0.4046	0.4832
J: Information and Communication	0.5641	0.5364	0.6044	0.6525	0.6485	0.6850	0.6967
K: Financial and Insurance Activities	0.5864	0.5564	0.7487	0.6842	0.6355	0.6386	0.5716
L: Real Estate Activities	0.4663	0.3886	0.5007	0.5054	0.4089	0.4397	0.4212
M: Professional, Scientific, and Technical Activities	0.4280	0.4017	0.5159	0.5419	0.4725	0.5852	0.5093
N: Administrative and Support Service Activities	0.3419	0.2003	0.4312	0.3844	0.1690	0.1853	0.1743
O: Public Administration	0.7334	0.6388	0.6575	0.5252	0.5719	0.6738	0.6589

and Defense, Compulsory Social Security							
P: Education	0.6345	0.6829	0.6959	0.6197	0.5688	0.3761	0.2540
Q: Human Health and Social Work Activities	0.5513	0.6047	0.6463	0.6652	0.5845	0.5921	0.6216
R: Arts, Entertainment and Recreation	0.1982	0.4529	0.4790	0.5497	0.5373	0.5533	0.5383
S: Other Service Activities	0.2891	0.1705	0.3825	0.2429	0.0803	0.0851	0.1085

Source: author's calculation

However, the financial stability of the water supply and sanitation sector is very low due to low investment volumes. The ratio of financial investments to total assets is around a quarter of a percent – an extremely low level, not even approaching one percent. Water transport and distribution networks are in extremely poor condition. Replacing and modernizing them requires financial resources that enterprises in this sector don't have. Enterprises of this sector are on the verge of bankruptcy due to high electricity bills.

The financial stability sub-index for sector P: Education began to decline in 2021, decreasing by 2.7 in 2024 compared to 2020. This decrease is due to a twofold decline in the financial autonomy ratio and a fourfold increase in the financial leverage (debt-to-equity) ratio. The main factors driving the downward trend in financial stability are the declining birth rate and youth exodus. In Moldova, educational institutions are funded using a standard per-student formula. As student numbers declined, funding declined as well, while heating and electricity tariffs increased. Some educational institutions faced budget deficits. To address this problem, the government decided to continue closing educational institutions with low enrollment. Previous school closures have shown that this will result in an increased exodus of young people from villages to cities or abroad, leading to the extinction of villages and a ruin of enterprises in rural areas.

Table 4.8. Sectoral Enterprise Competitiveness Index, Pillar 6. Growth dynamics and intangible potential

Sectors	2018	2019	2020	2021	2022	2023	2024
A: Agriculture, Forestry, and Fishing	0.5627	0.1343	0.0218	0.1143	0.1591	0.2357	0.2574
B: Mining and Quarrying	0.4438	0.0497	0.2636	0.3913	0.4183	0.5059	0.4513
C: Manufacturing	0.5046	0.1618	0.2964	0.2052	0.1927	0.2638	0.3731
D: Electricity, Gas, Steam, and Air Conditioning Supply	0.2935	0.3970	0.2891	0.2384	0.0838	0.1659	0.1643
E: Water Supply, Sewerage, Waste Management, and Remediation Activities	0.6735	0.2896	0.5240	0.3162	0.1149	0.1443	0.1850
F: Construction	0.4419	0.2917	0.3135	0.3161	0.1467	0.2325	0.3220
G: Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	0.6605	0.1519	0.2974	0.1390	0.1936	0.2228	0.2555
H: Transportation and Storage	0.5512	0.1288	0.2636	0.3131	0.1602	0.2060	0.2932
I: Accommodation and Food Service Activities	0.5829	0.1481	0.3058	0.3494	0.2254	0.2412	0.3412
J: Information and Communication	0.6394	0.3699	0.5056	0.3161	0.2996	0.2962	0.3452
K: Financial and Insurance	0.6007	0.1368	0.2620	0.1429	0.1788	0.2368	0.4244

Activities							
L: Real Estate Activities	0.7327	0.1487	0.3185	0.2677	0.2124	0.2545	0.3247
M: Professional, Scientific, and Technical Activities	0.5565	0.1733	0.2996	0.2260	0.1986	0.1544	0.2144
N: Administrative and Support Service Activities	0.6032	0.1364	0.3146	0.3086	0.2487	0.2523	0.3145
O: Public Administration and Defense, Compulsory Social Security	0.2396	0.4357	0.6123	0.5307	0.2185	0.1628	0.1191
P: Education	0.5638	0.1091	0.2629	0.0754	0.4453	0.4946	0.5708
Q: Human Health and Social Work Activities	0.6331	0.1747	0.2773	0.1362	0.1341	0.2249	0.2701
R: Arts, Entertainment and Recreation	0.3413	0.1788	0.2984	0.1982	0.3463	0.4209	0.3228
S: Other Service Activities	0.5403	0.1570	0.2599	0.2447	0.1867	0.1618	0.1834

Source: author's calculation

Sector J: Information Technology and Communications has the highest level of financial stability. This sector has received government support. The Moldova IT Park was established, providing residents with a single turnover tax, which contributed to increased financial stability, enabled the accumulation of significant equity capital, and attracted domestic and foreign investment.

An analysis of ***Pillar 6*** by sector revealed that half of the 19 sectors are relatively uncompetitive in terms of growth dynamics and intangible potential in 2024 and lack the foundation for future growth. Only three sectors have the potential to become more competitive in the future (Table 4.8).

One of these is the P-Education sector, which recorded a 17.5-fold increase in its intangible asset share in 2022. Due to the pandemic, educational institutions accelerated the adoption of digital technologies in the educational process, contributing to an increase in the sector's overall capitalization.

The high volatility of the sub-index "growth dynamics and intangible potential" for sector A: Agriculture, Forestry, and Fisheries is due to the sector's significant vulnerability. The main factors negatively impacting agricultural development include extreme weather events, which have become more frequent in recent years (2020, 2022, and 2024), a lack of intangible potential and innovation, rural labor outmigration, and the monopolization of agricultural product distribution channels by large intermediaries, which leads to a decrease in farm margins. Farmers face difficulties obtaining long-term loans. Most innovations can be acquired abroad. Investment is essential for the development of domestic innovation. Nevertheless, R&D (research and development) expenditure in 2024 amounted to only 0.22% of GDP (National Bureau of Statistics of the Republic of Moldova, 2025)[115].

An analysis of the ***Sectoral Enterprise Competitiveness Index (SECI)*** showed that the competitiveness of most sectors declined in 2019 and was lower than in 2020, the year of the COVID-19 pandemic. Only the competitiveness of sectors I: Accommodation and Food Service Activities and R: Arts, Entertainment, and Recreation continued to decline in 2020 (Table 4.9).

[115] National Bureau of Statistics of the Republic of Moldova. (2025). *Activitatea de cercetare-dezvoltare în anul 2024* [Research and development activity in 2024]. https://statistica.gov.md/ro/activitatea-de-cercetare-dezvoltare-in-anul-2024-9454_61750.html

Table 4.9. Sectoral Enterprise Competitiveness Index

Sectors	2018	2019	2020	2021	2022	2023	2024
A: Agriculture, Forestry, and Fishing	0.4637	0.3510	0.3520	0.4308	0.4093	0.3857	0.3584
B: Mining and Quarrying	0.5196	0.4407	0.5188	0.5340	0.5394	0.5099	0.4909
C: Manufacturing	0.4399	0.3241	0.4074	0.3657	0.3697	0.3836	0.3976
D: Electricity, Gas, Steam, and Air Conditioning Supply	0.2825	0.2814	0.3018	0.2255	0.1879	0.2234	0.1730
E: Water Supply, Sewerage, Waste Management, and Remediation Activities	0.4561	0.3245	0.4572	0.3595	0.3149	0.3398	0.3334
F: Construction	0.4411	0.3582	0.4339	0.4067	0.3735	0.3908	0.3658
G: Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	0.4532	0.3058	0.4078	0.3516	0.3716	0.3821	0.3624
H: Transportation and Storage	0.4340	0.3316	0.4060	0.3654	0.3688	0.3762	0.3626
I: Accommodation and Food Service Activities	0.3905	0.3019	0.2600	0.3265	0.3844	0.4469	0.4751
J: Information and Communication	0.4431	0.3783	0.4734	0.4534	0.4916	0.4993	0.4784
K: Financial and Insurance Activities	0.4451	0.3532	0.4268	0.4135	0.4447	0.4235	0.4483

L: Real Estate Activities	0.4572	0.3086	0.4193	0.4122	0.3948	0.3848	0.4025
M: Professional, Scientific, and Technical Activities	0.4441	0.3556	0.4350	0.4277	0.4380	0.4487	0.4279
N: Administrative and Support Service Activities	0.4267	0.3006	0.3843	0.3451	0.3339	0.3609	0.3568
O: Public Administration and Defense, Compulsory Social Security	0.3312	0.4582	0.5639	0.4768	0.3929	0.3802	0.3652
P: Education	0.3940	0.4577	0.5348	0.4173	0.4595	0.4690	0.4215
Q: Human Health and Social Work Activities	0.4930	0.4186	0.4745	0.4361	0.4376	0.4847	0.4718
R: Arts, Entertainment and Recreation	0.3293	0.3085	0.2996	0.2940	0.3521	0.3987	0.3559
S: Other Service Activities	0.4166	0.3063	0.3767	0.3436	0.3027	0.3563	0.3449

Source: author's calculation

The index's decline in 2019 was caused by domestic political instability and government changes. Thus, the competitiveness of the entrepreneurship sector is more sensitive to political crises than pandemic-related lockdowns.

After ranking sectors by competitiveness level for 2024 (according to the division criterion presented in Table 4.10), the top three were identified: sector B: Mining and Quarrying, sector J: Information and Communication, and sector I: Accommodation and Food Service Activities (Table 4.11). The lowest competitiveness (19^{th} rank) was recorded by sector D: Electricity, Gas, Steam, and Air Conditioning Supply.

Table 10. Division criterion by the enterprise competitiveness at the sectoral level, 2024

Interval	Degree of sectoral enterprise competitiveness (SEC)
$0.4594 \leq SEC_i$	**Very high degree of competitiveness**
$0.4279 \leq SEC_i < 0.4594$	**High degree of competitiveness**
$0.3964 \leq SEC_i < 0.4279$	**Medium degree of competitiveness**
$0.3649 \leq SEC_i < 0.3964$	**Low degree of competitiveness**
$SEC_i < 0.3649$	**Very low degree of competitiveness**

Source: author's elaboration

The high competitiveness of IT enterprises is due to the opportunity to operate in a stable tax environment as residents of the Moldova IT Park (MITP). These residents are subject to a single 7% tax on turnover. According to Law No. 77/2016, the tax rules for MITP residents will not change until 2035, which is fundamental to increasing investor confidence (Parlamentul Republicii Moldova, 2016)[116].

Table 4.11. Rank of enterprise competitiveness by sectors, 2024

Sectors	Rank							Degree of SEC
	Pillar 1	Pillar 2	Pillar 3	Pillar 4	Pillar 5	Pillar 6	SECI	
A: Agriculture, Forestry, and Fishing	6	10	15	14	13	13	14	**Very low**
B: Mining and Quarrying	1	8	3	12	2	2	1	**Very high**
C: Manufacturing	15	11	13	11	6	4	9	**Medium**
D: Electricity, Gas, Steam, and Air Conditioning Supply	19	12	14	18	18	18	19	**Very low**

[116] Parlamentul Republicii Moldova. (2016). *Lege cu privire la parcurile pentru tehnologia informației (Nr. 77 din 21 aprilie 2016)*. Monitorul Oficial al Republicii Moldova, Nr. 157–162 art. 318. https://www.legis.md/cautare/getResults?doc_id=93161&lang=ro#

E: Water Supply, Sewerage, Waste Management, and Remediation Activities	3	4	17	17	17	16	18	**Very low**
F: Construction	5	14	11	9	14	9	10	**Low**
G: Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles	16	17	5	13	8	14	13	**Very low**
H: Transportation and Storage	14	15	10	10	11	11	12	**Very low**
I: Accommodation and Food Service Activities	8	3	4	6	10	6	3	**Very high**
J: Information and Communication	11	9	9	5	1	5	2	**Very high**
K: Financial and Insurance Activities	13	19	2	2	5	3	5	**High**
L: Real Estate Activities	7	18	1	7	12	7	8	**Medium**
M: Professional, Scientific, and Technical Activities	9	16	7	1	9	15	6	**High**
N: Administrative and Support Service Activities	12	7	18	8	16	10	15	**Very low**
O: Public Administration and Defense, Compulsory Social Security	17	1	8	19	3	19	11	**Low**
P: Education	2	6	16	15	15	1	7	**Medium**
Q: Human Health and Social Work Activities	10	5	12	3	4	12	4	**Very high**
R: Arts, Entertainment and Recreation	18	2	19	16	7	8	16	**Very low**
S: Other Service Activities	4	13	6	4	19	17	17	**Very low**

Source: author's calculation

According to a report by the Ministry of Economic Development and Digitalization, by the end of 2024, the number of MITP residents reached 2,154 enterprises, and the number of countries from which foreign capital originates reached 42 (Ministerul Dezvoltării Economice și Digitalizării, 2025)[117].

Regional Enterprise Competitiveness Index: estimation, challenges and advantages

The use of the Regional Enterprise Competitiveness Index in the analysis enabled the identification of development asymmetry between Administrative-Territorial Units (ATU).

Table 4.12. Regional Enterprise Competitiveness Index, Pillar 1. Business structure and scale

ATU	2018	2019	2020	2021	2022	2023	2024
Balti municipality	0.2256	0.1968	0.2048	0.2998	0.2232	0.2463	0.3090
Briceni	0.4947	0.3590	0.3881	0.3397	0.2846	0.3406	0.3671
Donduseni	0.6300	0.5980	0.5924	0.5139	0.5357	0.5116	0.5283
Drochia	0.1680	0.1698	0.1488	0.1905	0.1903	0.1427	0.1753
Edinet	0.2523	0.2271	0.2443	0.3100	0.3365	0.3485	0.2182
Falesti	0.4291	0.3502	0.3201	0.3665	0.3738	0.3352	0.3224
Floresti	0.4104	0.3477	0.3228	0.3207	0.2749	0.2271	0.2462
Glodeni	0.4890	0.4277	0.4663	0.4339	0.5069	0.4717	0.5089
Ocnita	0.5814	0.4771	0.5369	0.4982	0.5212	0.5128	0.5704
Riscani	0.5048	0.3791	0.4023	0.3787	0.3364	0.2850	0.4011
Singerei	0.3523	0.3142	0.3288	0.2765	0.2568	0.2516	0.2289
Soroca	0.4040	0.3718	0.4716	0.4656	0.4327	0.4247	0.4022
Chisinau municipality	0.3784	0.2916	0.3180	0.4033	0.3698	0.3452	0.3586
Anenii Noi	0.2990	0.2640	0.2853	0.3183	0.2602	0.3416	0.2713
Calarasi	0.5663	0.5096	0.5802	0.5275	0.4856	0.4851	0.3975
Criuleni	0.3377	0.3112	0.2532	0.4324	0.5118	0.5464	0.5158
Dubasari	0.3410	0.3504	0.3158	0.2825	0.2214	0.3914	0.3780

[117] Ministerul Dezvoltării Economice și Digitalizării. (2025). *Raport de evaluare a activității parcului pentru tehnologia informației „Moldova IT Park" în anul 2024* [Evaluation report on the activity of the information technology park "Moldova IT Park" in 2024]. https://mded.gov.md/wp-content/uploads/2025/10/1-Raport-de-evaluare-Moldova-IT-park_2024.signed.signed.signed.signed.signed.signed.semnat.semnat.pdf

Hincesti	0.5004	0.3154	0.4354	0.4714	0.4176	0.4450	0.4553
Ialoveni	0.2656	0.1641	0.2228	0.3976	0.3567	0.3685	0.3875
Nisporeni	0.3314	0.2141	0.3262	0.1886	0.1843	0.2558	0.2788
Orhei	0.4171	0.2704	0.3328	0.3153	0.2659	0.2786	0.2580
Rezina	0.2650	0.1877	0.2062	0.2175	0.3292	0.3579	0.3904
Straseni	0.4550	0.2639	0.3656	0.4914	0.5144	0.4681	0.5669
Soldanesti	0.5191	0.4948	0.5164	0.4241	0.4234	0.4066	0.4649
Telenesti	0.2455	0.3753	0.3957	0.2846	0.3569	0.3266	0.3832
Ungheni	0.3785	0.3486	0.3862	0.3988	0.4267	0.4243	0.4514
Basarabeasca	0.5679	0.5192	0.5549	0.3170	0.3364	0.3156	0.4093
Cahul	0.5745	0.5005	0.4737	0.4825	0.4939	0.5485	0.5621
Cantemir	0.3014	0.2178	0.2695	0.3120	0.5094	0.5151	0.6002
Causeni	0.4344	0.4924	0.3495	0.4574	0.4903	0.4089	0.4559
Cimislia	0.3754	0.5451	0.4980	0.4880	0.4331	0.5803	0.6038
Leova	0.5036	0.4969	0.4558	0.3727	0.3907	0.3456	0.4268
Stefan Voda	0.4906	0.4090	0.4247	0.4417	0.4836	0.4419	0.4914
Taraclia	0.5661	0.3994	0.3922	0.3972	0.4779	0.4815	0.4939
ATU Gagauzia	0.4840	0.3928	0.4358	0.4885	0.4991	0.5217	0.4993

Source: author's calculation

The results of the assessment of competitiveness in terms of business structure and scale (***Pillar 1***) challenge the assumption that Chisinau leads competitiveness rankings across all criteria, showing that the capital does not occupy a leading position on separate competitiveness criteria (Table 4.12). In Chisinau, some micro-businesses close each year, and others open. The cost of commercial real estate in the capital is very high, which makes scaling too expensive. For this reason, the business intentionally remains in the small or micro categories in order to preserve the simplified taxation regime.

The high enterprise size ratio (medium vs. small and micro) and the medium-sized enterprises' sales revenue share ensured that the districts of Cantemir and Cimislia held a leading position in the regional ranking of competitiveness in terms of business structure. In the southern region, the rate of active enterprises is higher than in the northern or central regions, and even higher than in Chisinau municipality. Among the central districts, Straseni district has the greatest comparative advantages, as it has a high enterprise density per 1,000 inhabitants and a high diversity index.

Table 4.13. Regional Enterprise Competitiveness Index, Pillar 2. Entrepreneurial base and labour engagement

ATU	2018	2019	2020	2021	2022	2023	2024
Balti municipality	0.5408	0.5388	0.5984	0.5722	0.5510	0.6264	0.6214
Briceni	0.5649	0.4901	0.4376	0.3077	0.3102	0.4150	0.4572
Donduseni	0.3754	0.3648	0.3727	0.4998	0.4733	0.6131	0.5542
Drochia	0.3863	0.2598	0.2902	0.2675	0.3446	0.3494	0.3288
Edinet	0.5617	0.5284	0.5963	0.5833	0.5473	0.5233	0.4752
Falesti	0.4888	0.3958	0.3901	0.3489	0.3469	0.3857	0.3820
Floresti	0.4531	0.3962	0.3734	0.2403	0.2578	0.1707	0.1639
Glodeni	0.5197	0.4277	0.4220	0.3612	0.4365	0.4811	0.4718
Ocnita	0.5319	0.5027	0.5106	0.4968	0.5566	0.5131	0.5010
Riscani	0.3567	0.2632	0.2973	0.2326	0.2862	0.3138	0.3533
Singerei	0.2331	0.2250	0.2290	0.2134	0.2713	0.2796	0.1838
Soroca	0.3655	0.3287	0.2930	0.2738	0.2955	0.4326	0.2953
Chisinau municipality	0.5275	0.4929	0.5005	0.4834	0.5170	0.5969	0.6044
Anenii Noi	0.2791	0.2676	0.3354	0.2699	0.3144	0.3739	0.4212
Calarasi	0.4555	0.4139	0.4475	0.3695	0.3139	0.4247	0.3054
Criuleni	0.3176	0.2901	0.2423	0.2917	0.2703	0.3703	0.3563
Dubasari	0.2773	0.2458	0.2358	0.1527	0.2417	0.3781	0.3258
Hincesti	0.3740	0.2922	0.3790	0.3062	0.3185	0.3413	0.3623
Ialoveni	0.3332	0.2761	0.2715	0.1620	0.2054	0.2570	0.3646
Nisporeni	0.3958	0.3260	0.2957	0.1551	0.1528	0.3338	0.3789
Orhei	0.3327	0.4055	0.4104	0.3333	0.2580	0.3327	0.3758
Rezina	0.4543	0.3954	0.3805	0.3616	0.3572	0.3554	0.3415
Straseni	0.3170	0.3275	0.2945	0.3504	0.3451	0.4406	0.4222
Soldanesti	0.4157	0.4150	0.4567	0.2800	0.2595	0.3097	0.3438
Telenesti	0.3448	0.3568	0.3919	0.3298	0.3933	0.1706	0.1590
Ungheni	0.3905	0.3514	0.3667	0.3456	0.3367	0.3664	0.2504
Basarabeasca	0.4962	0.2944	0.3807	0.2063	0.3432	0.5500	0.4438
Cahul	0.5161	0.4636	0.4466	0.3967	0.4216	0.5359	0.4970
Cantemir	0.5477	0.3249	0.3469	0.2833	0.4104	0.6261	0.4230
Causeni	0.3876	0.4206	0.4205	0.3813	0.3706	0.2774	0.3594
Cimislia	0.5240	0.3868	0.3563	0.3231	0.3618	0.5625	0.4208
Leova	0.4200	0.3893	0.3121	0.3147	0.3774	0.4076	0.3808
Stefan Voda	0.5206	0.4081	0.4062	0.3885	0.4961	0.5499	0.4581
Taraclia	0.5201	0.4038	0.4154	0.4507	0.5579	0.7062	0.6821
ATU Gagauzia	0.4814	0.4275	0.4392	0.4172	0.4163	0.5091	0.3934

Source: author's calculation

Taraclia district, Balti and Chisinau municipalities lead in competitiveness in terms of entrepreneurial base and labor engagement (***Pillar 2***) (Table 4.13). Despite demographic decline and population exodus, Taraclia district recorded a 15% increase in employment in the entrepreneurship sector from 2018 to 2024, and a high average number of employees per enterprise. Chisinau and Balti municipalities traditionally lead in employment concentration. Enterprise employment per 1,000 inhabitants in Chisinau was 504, while in Balti it was 394 in 2024. Thus, in Chisinau, every second inhabitant is involved in entrepreneurial activity.

A 2.8-fold decrease in competitive advantages in terms of entrepreneurial base and labor engagement was observed in Floresti district, and a 2.2-fold decrease in Telenesti district for the period 2018–2024, which is why these districts are ranked last in pillar 2. The main reason for this negative trend is the negative level of CAGR of employment (3-year). For example, in Floresti district, the employment rate declined much more than the population did. From 2018 to 2024, the employment rate fell by 29.9%, while the usually resident population dropped by 15.2%.

The interaction of internal resources and external institutional conditions shapes enterprise performance in Moldova. Productivity is a key factor in assessing competitiveness and reflects the efficient use of not only equipment and technology, but also labor and other resources. Efficient use of all resources is key to economic growth. The distribution of districts by productivity and resource efficiency (***Pillar 3***) revealed an asymmetry between municipalities and peripheral districts (Table 4.14). The highest level among districts for the indicator "Sales to labor cost ratio" and a high level of the indicator "Capital to labor cost ratio" ensured that Dubasari district topped the ranking for this competitiveness criterion (Table 4.14). In the regional ranking of pillar 3, Criuleni district ranks second after Dubasari district, having recorded the highest relative productivity ratio of medium-sized enterprises to small and micro enterprises. The districts of the northern region, Glodeni and Falesti, remain at a low level due to low indicator values for "Sales to labor cost ratio" and "Capital to labor cost ratio," and a high "Operating Expenses Ratio."

Table 4.14. Regional Enterprise Competitiveness Index, Pillar 3. Productivity and resource efficiency

ATU	2018	2019	2020	2021	2022	2023	2024
Balti municipality	0.4117	0.4933	0.3647	0.3127	0.3960	0.5034	0.4506
Briceni	0.3216	0.3321	0.4097	0.4099	0.4632	0.5078	0.4618
Donduseni	0.4421	0.4998	0.5213	0.4716	0.6553	0.5948	0.5447
Drochia	0.5911	0.6395	0.5402	0.5479	0.5455	0.5858	0.5862
Edinet	0.5304	0.5037	0.4306	0.4298	0.5563	0.6030	0.5543
Falesti	0.2774	0.3140	0.2668	0.3069	0.3723	0.4057	0.3085
Floresti	0.3768	0.4642	0.3411	0.3902	0.4655	0.4747	0.4612
Glodeni	0.2064	0.2306	0.2078	0.2533	0.4213	0.3587	0.2775
Ocnita	0.3164	0.3014	0.3433	0.5168	0.5403	0.4922	0.4447
Riscani	0.4603	0.4255	0.4242	0.4136	0.4242	0.4945	0.4580
Singerei	0.4216	0.4677	0.4363	0.4372	0.5235	0.5359	0.4273
Soroca	0.4190	0.3694	0.4043	0.3476	0.4150	0.4257	0.4282
Chisinau municipality	0.4471	0.5031	0.4292	0.3669	0.4565	0.5042	0.5062
Anenii Noi	0.4257	0.4419	0.4813	0.4761	0.5564	0.6591	0.5828
Calarasi	0.3573	0.3366	0.3143	0.2918	0.3276	0.3761	0.3920
Criuleni	0.4692	0.5268	0.4305	0.4163	0.5290	0.7065	0.6952
Dubasari	0.3489	0.6766	0.5589	0.3854	0.5413	0.7070	0.8031
Hincesti	0.4500	0.4458	0.2770	0.3530	0.4324	0.5179	0.5830
Ialoveni	0.6276	0.5934	0.5759	0.5188	0.6002	0.6841	0.5911
Nisporeni	0.4031	0.4267	0.3659	0.2869	0.5146	0.4697	0.3957
Orhei	0.4794	0.5455	0.4878	0.3457	0.4213	0.5030	0.4517
Rezina	0.4033	0.4630	0.4100	0.5004	0.6345	0.4779	0.5100
Straseni	0.5076	0.3648	0.3353	0.3501	0.5030	0.4810	0.5415
Soldanesti	0.3146	0.3861	0.3120	0.3581	0.4164	0.4494	0.4548
Telenesti	0.3222	0.2585	0.2897	0.4130	0.4697	0.5509	0.5229
Ungheni	0.4206	0.4527	0.4500	0.3336	0.3551	0.4459	0.4229
Basarabeasca	0.3814	0.4049	0.4111	0.3993	0.3921	0.3425	0.2873
Cahul	0.4194	0.4173	0.3431	0.4097	0.4319	0.4936	0.4425
Cantemir	0.4501	0.4468	0.4474	0.5517	0.4631	0.3072	0.3806
Causeni	0.3888	0.4827	0.2588	0.3511	0.4964	0.4864	0.4637
Cimislia	0.3686	0.5515	0.4270	0.4264	0.4409	0.6147	0.6191

Leova	0.3558	0.4297	0.3402	0.4331	0.4735	0.3938	0.3171
Stefan Voda	0.3334	0.3735	0.3198	0.4248	0.4568	0.4462	0.5362
Taraclia	0.3290	0.3514	0.3853	0.4100	0.4843	0.4888	0.5095
ATU Gagauzia	0.4542	0.4507	0.4561	0.4349	0.5096	0.5350	0.5273

Source: author's calculation

An analysis of enterprise competitiveness, by district, in terms of financial results and profitability (***Pillar 4***), revealed that the Moldovan economy is polarized (Table 4.15). The geographic distribution of enterprise profitability closely correlates with proximity to transport and logistics hubs, the location of customs checkpoints with the most intensive international transport traffic, and the concentration of agricultural enterprises, whose profitability depends on weather conditions. Briceni rightfully leads the ranking of districts with the most profitable entrepreneurship sector.

This district has the highest share of profitable enterprises in the country and the lowest share of enterprises without sales, as well as enterprises with a comparatively high operating profit margin.

Table 4.15. Regional Enterprise Competitiveness Index, Pillar 4. Financial results and profitability

ATU	2018	2019	2020	2021	2022	2023	2024
Balti municipality	0.3810	0.3761	0.4935	0.2275	0.3837	0.6149	0.4977
Briceni	0.8690	0.9505	1.0000	0.6677	0.7344	0.9028	0.8906
Donduseni	0.6480	0.7244	0.5573	0.7638	0.9136	0.8376	0.7182
Drochia	0.3813	0.4736	0.6181	0.5666	0.5095	0.7198	0.5183
Edinet	0.6455	0.6631	0.7768	0.5643	0.6815	0.7170	0.6109
Falesti	0.5628	0.5370	0.7110	0.6197	0.5239	0.7715	0.5871
Floresti	0.6019	0.6561	0.5730	0.6228	0.4927	0.6739	0.5875
Glodeni	0.3897	0.6980	0.7509	0.6531	0.6093	0.6336	0.4044
Ocnita	0.6811	0.7008	0.8750	0.6547	0.6973	0.8022	0.7273
Riscani	0.6582	0.7164	0.7497	0.6092	0.5284	0.7838	0.6024
Singerei	0.5530	0.6413	0.4088	0.6191	0.5820	0.6325	0.5754
Soroca	0.4507	0.4906	0.5232	0.3459	0.3721	0.6177	0.4768

Chisinau municipality	0.3631	0.3656	0.4257	0.2218	0.3109	0.6138	0.5613
Anenii Noi	0.3997	0.5823	0.5890	0.4225	0.6020	0.8197	0.7869
Calarasi	0.5624	0.5066	0.7106	0.4296	0.4431	0.7704	0.7271
Criuleni	0.5116	0.3326	0.4322	0.3573	0.3787	0.6942	0.6757
Dubasari	0.5319	0.3900	0.5609	0.5635	0.6923	0.6783	0.7212
Hincesti	0.3726	0.3161	0.3757	0.3143	0.4038	0.5576	0.5525
Ialoveni	0.4698	0.4507	0.5210	0.3435	0.4390	0.6627	0.5877
Nisporeni	0.3586	0.3018	0.6005	0.2570	0.4488	0.7317	0.6755
Orhei	0.3773	0.2773	0.4244	0.3865	0.3635	0.6348	0.5490
Rezina	0.6425	0.6589	0.6381	0.6749	0.8096	0.6961	0.6853
Straseni	0.5468	0.4373	0.4736	0.2364	0.4591	0.6721	0.6090
Soldanesti	0.6860	0.9032	0.7172	0.7572	0.7391	0.7653	0.7232
Telenesti	0.6311	0.5149	0.3968	0.4162	0.3367	0.5821	0.4363
Ungheni	0.3039	0.2670	0.3554	0.1987	0.0000	0.3200	0.2970
Basarabeasca	0.5010	0.2771	0.1792	0.7013	0.6016	0.7655	0.5732
Cahul	0.5001	0.4672	0.6210	0.5979	0.5279	0.7620	0.6357
Cantemir	0.5497	0.5380	0.3375	0.8423	0.4803	0.2146	0.2358
Causeni	0.4268	0.3693	0.2389	0.3727	0.4864	0.6660	0.4972
Cimislia	0.5692	0.5440	0.4379	0.5118	0.4702	0.6475	0.6067
Leova	0.6297	0.7017	0.3753	0.8706	0.6776	0.6126	0.4314
Stefan Voda	0.6510	0.5344	0.5932	0.4966	0.6512	0.6753	0.6711
Taraclia	0.4909	0.4493	0.6162	0.6050	0.4862	0.6922	0.6376
ATU Gagauzia	0.5887	0.4761	0.4932	0.5511	0.5492	0.6816	0.6132

Source: author's calculation

Cantemir is proof that, in some districts, competitiveness in terms of financial results and profitability (Pillar 4) depends on the concentration of agricultural enterprises. In 2021, this district recorded a record-high grain yield, resulting in a Financial Results and Profitability Index score of 0.8423. However, this indicator declined in subsequent years. As a result, Cantemir ranked last in 2024. The profitability of enterprises in this district depends on weather conditions, as the share of agricultural enterprises ranges from 37.34% to 44.50% in 2018-2024. Although three other districts (Briceni, Donduseni, and Soldanesti) recorded a similar share of agricultural enterprises, they are located in other agroclimatic zones. In 2022-

2024, yields in these districts were 1.4-2.1 times higher than in Cantemir.

Nisporeni and Drochia districts top the enterprise competitiveness rankings in terms of financial stability and capital structure (***Pillar 5***) (Table 4.16). The main reason for this is the predominance of microenterprises, whose share in Nisporeni district is 93% and in Drochia district 85% in 2024. Therefore, in the pillar 1 ranking, these districts receive the lowest rankings. Respectively, Drochia district ranks 35th, and Nisporeni district ranks 29th. Microenterprises have low levels of liabilities because they are largely financed with equity capital.

Table 4.16. Regional Enterprise Competitiveness Index, Pillar 5. Financial stability and capital structure

ATU	2018	2019	2020	2021	2022	2023	2024
Balti municipality	0.4300	0.3916	0.3040	0.1526	0.2205	0.2864	0.5719
Briceni	0.6665	0.6807	0.7043	0.6449	0.6571	0.5699	0.5986
Donduseni	0.5234	0.5514	0.4896	0.4623	0.6085	0.6189	0.6179
Drochia	0.7777	0.6371	0.7986	0.7949	0.8292	0.8177	0.7666
Edinet	0.5490	0.4945	0.5281	0.4127	0.6048	0.5087	0.5754
Falesti	0.5927	0.5326	0.5352	0.5442	0.5348	0.4735	0.5456
Floresti	0.5033	0.4166	0.4332	0.4276	0.6173	0.5264	0.5703
Glodeni	0.4559	0.4279	0.4356	0.4051	0.4680	0.3106	0.4150
Ocnita	0.6033	0.5119	0.5975	0.5467	0.6003	0.4967	0.5474
Riscani	0.6953	0.6866	0.7091	0.7054	0.6592	0.6835	0.6236
Singerei	0.4391	0.5316	0.3840	0.4092	0.4462	0.3776	0.4411
Soroca	0.5267	0.4918	0.5187	0.4473	0.5228	0.4097	0.5500
Chisinau municipality	0.6397	0.5613	0.6042	0.4624	0.5660	0.5252	0.6417
Anenii Noi	0.5990	0.5687	0.5051	0.3537	0.4435	0.3975	0.5877
Calarasi	0.5050	0.4419	0.4754	0.3745	0.4164	0.3743	0.5157
Criuleni	0.4707	0.4147	0.2864	0.3004	0.3349	0.2633	0.4477
Dubasari	0.4239	0.1207	0.1092	0.0984	0.3150	0.1406	0.4076
Hincesti	0.5731	0.5142	0.5266	0.4740	0.5175	0.4446	0.5833

Ialoveni	0.5408	0.4820	0.4862	0.3826	0.4447	0.4327	0.5277
Nisporeni	0.7821	0.7779	0.8601	0.7803	0.8994	0.6967	0.7890
Orhei	0.3695	0.1926	0.1745	0.1423	0.2632	0.2710	0.4755
Rezina	0.6615	0.5302	0.5449	0.1829	0.6807	0.6731	0.7625
Straseni	0.5911	0.4743	0.5106	0.3793	0.3410	0.3652	0.5143
Soldanesti	0.3259	0.2711	0.3692	0.3729	0.5275	0.5620	0.5681
Telenesti	0.3062	0.6565	0.5779	0.5124	0.6550	0.6001	0.6918
Ungheni	0.6463	0.7108	0.7871	0.5097	0.4675	0.3554	0.4689
Basarabeasca	0.5005	0.5229	0.5131	0.5155	0.5494	0.2511	0.2514
Cahul	0.6019	0.5620	0.5973	0.6156	0.6191	0.5581	0.6079
Cantemir	0.6642	0.6275	0.5132	0.6191	0.6277	0.2914	0.3163
Causeni	0.4922	0.2594	0.2304	0.0473	0.2339	0.2176	0.4371
Cimislia	0.5739	0.5479	0.5401	0.5439	0.5842	0.4277	0.4924
Leova	0.4937	0.4992	0.3468	0.4682	0.5670	0.3448	0.4410
Stefan Voda	0.6705	0.6194	0.6159	0.6288	0.6496	0.5877	0.5637
Taraclia	0.1503	0.1631	0.2192	0.5411	0.6810	0.5156	0.4994
ATU Gagauzia	0.6100	0.4977	0.4683	0.4056	0.5240	0.4898	0.5882

Source: author's calculation

In Nisporeni district, the share of agricultural enterprises among all enterprises has doubled from 2018 to 2024. These enterprises finance their assets through their own funds, use their own land and equipment, and therefore enjoy high financial autonomy. Other causal factors are low capital intensity among enterprises and limited access to bank financing due to stringent banking requirements. Telenesti district ranks 4th, as it has the highest financial investment to total assets ratio.

The lowest level of competitiveness in terms of financial stability and capital structure was recorded in Basarabeasca district. This indicator decreased by 2.2 times in 2023 compared to 2022. The main indicator whose change affected pillar 5's value was the financial leverage (debt to equity ratio). This indicator increased by 1.9 times in 2023 and by 2.4 times in 2024 compared to the previous year. The increase in financial leverage was due to an increase in non current liabilities: a 2.3-fold increase in 2023 and a 2.5-fold increase in 2024. Borrowed funds were used to finance working capital and current operations rather than investments.

Table 4.17. Regional Enterprise Competitiveness Index, Pillar 6. Growth dynamics and intangible potential

ATU	2018	2019	2020	2021	2022	2023	2024
Balti municipality	0.3005	0.4173	0.3997	0.2364	0.5096	0.4497	0.4273
Briceni	0.2812	0.4199	0.4020	0.3280	0.4906	0.3712	0.4005
Donduseni	0.0030	0.2062	0.1491	0.3353	0.7467	0.6530	0.5829
Drochia	0.2768	0.2130	0.2235	0.2438	0.5492	0.4254	0.4010
Edinet	0.1502	0.3748	0.4043	0.3423	0.4204	0.2945	0.2300
Falesti	0.2818	0.3649	0.4245	0.2706	0.4853	0.3335	0.3051
Floresti	0.2770	0.4081	0.3052	0.4058	0.6096	0.4939	0.3952
Glodeni	0.2938	0.4052	0.5432	0.4653	0.5816	0.4125	0.3769
Ocnita	0.2807	0.3286	0.5422	0.2582	0.5321	0.3289	0.4293
Riscani	0.3580	0.4559	0.3386	0.2526	0.4465	0.3706	0.3818
Singerei	0.3078	0.4019	0.4239	0.2809	0.5463	0.3948	0.3115
Soroca	0.2675	0.4183	0.5679	0.3807	0.6478	0.3095	0.3585
Chisinau municipality	0.4173	0.5570	0.4696	0.3521	0.5632	0.5030	0.4847
Anenii Noi	0.6581	0.4535	0.4294	0.2005	0.5521	0.3936	0.3841
Calarasi	0.2550	0.3681	0.4294	0.2214	0.4784	0.3230	0.3854
Criuleni	0.5001	0.6583	0.6567	0.4820	0.7532	0.6084	0.6221
Dubasari	0.4236	0.5553	0.5936	0.4143	0.5539	0.3283	0.4172
Hincesti	0.3499	0.3911	0.3474	0.2542	0.4767	0.3763	0.4255
Ialoveni	0.3273	0.4709	0.4295	0.2931	0.4452	0.3543	0.3885
Nisporeni	0.3527	0.4298	0.3735	0.2823	0.4624	0.4620	0.3630
Orhei	0.2992	0.4713	0.4431	0.3028	0.5085	0.4700	0.3825
Rezina	0.4394	0.5576	0.3583	0.2737	0.4044	0.0822	0.1562
Straseni	0.3235	0.4720	0.5466	0.3318	0.5825	0.3378	0.3414
Soldanesti	0.2975	0.4420	0.3504	0.3118	0.4457	0.4037	0.3262
Telenesti	0.4119	0.4062	0.3160	0.3710	0.4471	0.4178	0.3679
Ungheni	0.2571	0.4262	0.6564	0.4132	0.4212	0.3146	0.4076
Basarabeasca	0.2160	0.2362	0.3046	0.3116	0.4677	0.4634	0.4133
Cahul	0.3433	0.4669	0.3939	0.2687	0.4490	0.3962	0.3298
Cantemir	0.1701	0.3610	0.3620	0.2177	0.0498	0.0000	0.1586
Causeni	0.3752	0.6259	0.4206	0.3012	0.4017	0.4132	0.3414
Cimislia	0.2462	0.3691	0.2969	0.2983	0.5435	0.4407	0.3918
Leova	0.2349	0.3577	0.3093	0.2373	0.4523	0.3822	0.5317
Stefan Voda	0.3272	0.4120	0.3685	0.2463	0.5071	0.3798	0.3582
Taraclia	0.3520	0.3551	0.3972	0.3076	0.5432	0.3475	0.3983
ATU Gagauzia	0.2518	0.3454	0.3676	0.3321	0.5562	0.3945	0.2023

Source: author's calculation

The highest share of intangible assets in the country is held by enterprises located in Chisinau municipality. In 2018-2024, the capital was home to 60-64% of all enterprises in the country, as well as to Moldova IT Park and to the majority of universities, including research institutes. Therefore, Chisinau municipality enterprises are relatively highly competitive in terms of growth dynamics and intangible potential (***Pillar 6***), ranking fourth in 2024, behind only the districts of Criuleni, Donduseni, and Leova (Table 4.17).

Criuleni district enterprises recorded the highest level of intangible intensity, placing this district as the leader in competitiveness in terms of growth dynamics and intangible potential. A significant increase in intangible assets was facilitated by changes in the district's economic structure. Sectors typically rich in intangible assets are sector J: Information and Communication, and sector M: Professional, Scientific, and Technical Activities. A part of the newly registered enterprises in Criuleni belong to these sectors. The number of enterprises in Sector J increased by 3.2-fold, and in Sector M by 1.8-fold, from 2018 to 2024.

Another sector that recorded an increase in the number of enterprises was Sector G: Wholesale and Retail Trade, which rose 1.5-fold. These enterprises have fewer tangible assets and more intangible ones. Another factor driving the growth of this competitiveness criterion is that Criuleni district is located near Chisinau, and IT enterprises and service firms are registering in suburban areas, which allows for lower costs, primarily rent.

The ***Regional Enterprise Competitiveness Index (RECI)*** recorded significant growth for the Donduseni and Taraclia districts, which are at the top of the ranking (first rank and third rank, respectively) in 2018-2024 (Table 4.18).

Table 4.18. Regional Enterprise Competitiveness Index

ATU	2018	2019	2020	2021	2022	2023	2024
Balti municipality	0.3816	0.4023	0.3942	0.3002	0.3807	0.4545	0.4797
Briceni	0.5330	0.5387	0.5569	0.4497	0.4900	0.5179	0.5293
Donduseni	0.4370	0.4908	0.4471	0.5078	0.6555	0.6382	0.5910

Drochia	0.4302	0.3988	0.4366	0.4352	0.4947	0.5068	0.4627
Edinet	0.4482	0.4653	0.4967	0.4404	0.5245	0.4992	0.4440
Falesti	0.4388	0.4157	0.4413	0.4095	0.4395	0.4508	0.4085
Floresti	0.4371	0.4481	0.3914	0.4012	0.4530	0.4278	0.4041
Glodeni	0.3924	0.4362	0.4710	0.4287	0.5039	0.4447	0.4091
Ocnita	0.4991	0.4704	0.5676	0.4952	0.5746	0.5243	0.5367
Riscani	0.5055	0.4878	0.4869	0.4320	0.4468	0.4885	0.4700
Singerei	0.3845	0.4303	0.3685	0.3727	0.4377	0.4120	0.3613
Soroca	0.4056	0.4118	0.4631	0.3768	0.4477	0.4367	0.4185
Chisinau municipality	0.4622	0.4619	0.4579	0.3816	0.4639	0.5147	0.5262
Anenii Noi	0.4434	0.4297	0.4376	0.3402	0.4548	0.4976	0.5057
Calarasi	0.4503	0.4294	0.4929	0.3691	0.4108	0.4589	0.4538
Criuleni	0.4345	0.4223	0.3835	0.3800	0.4630	0.5315	0.5521
Dubasari	0.3911	0.3898	0.3957	0.3161	0.4276	0.4373	0.5088
Hincesti	0.4367	0.3792	0.3902	0.3622	0.4278	0.4471	0.4936
Ialoveni	0.4274	0.4062	0.4178	0.3496	0.4152	0.4599	0.4745
Nisporeni	0.4373	0.4127	0.4703	0.3250	0.4437	0.4916	0.4801
Orhei	0.3792	0.3604	0.3788	0.3043	0.3467	0.4150	0.4154
Rezina	0.4777	0.4655	0.4230	0.3685	0.5360	0.4404	0.4743
Straseni	0.4568	0.3900	0.4210	0.3566	0.4575	0.4608	0.4992
Soldanesti	0.4265	0.4854	0.4537	0.4173	0.4686	0.4828	0.4802
Telenesti	0.3769	0.4281	0.3947	0.3878	0.4431	0.4413	0.4269
Ungheni	0.3995	0.4261	0.5003	0.3666	0.3345	0.3711	0.3831
Basarabeasca	0.4438	0.3758	0.3906	0.4085	0.4484	0.4480	0.3964
Cahul	0.4925	0.4796	0.4793	0.4619	0.4906	0.5490	0.5125
Cantemir	0.4472	0.4193	0.3794	0.4710	0.4235	0.3257	0.3524
Causeni	0.4175	0.4417	0.3198	0.3185	0.4132	0.4116	0.4258
Cimislia	0.4429	0.4907	0.4260	0.4319	0.4723	0.5456	0.5224
Leova	0.4396	0.4791	0.3566	0.4494	0.4897	0.4144	0.4215
Stefan Voda	0.4989	0.4594	0.4547	0.4378	0.5408	0.5135	0.5131
Taraclia	0.4014	0.3537	0.4043	0.4519	0.5384	0.5386	0.5368
ATU Gagauzia	0.4783	0.4317	0.4433	0.4382	0.5091	0.5219	0.4706

Source: author's calculation

To identify which districts fall into the very high and relatively high competitiveness categories, as well as the very low and relatively low competitiveness categories, the interval boundaries were established and are presented in Table 4.19.

Table 4.19. Division criterion by the enterprise competitiveness at the Administrative-Territorial Unit, 2024

Interval	Degree of regional enterprise competitiveness (REC)
$0.5433 \leq REC_i$	**Very high degree of competitiveness**
$0.4956 \leq REC_i < 0.5433$	**High degree of competitiveness**
$0.4479 \leq REC_i < 0.4956$	**Medium degree of competitiveness**
$0.4001 \leq REC_i < 0.4479$	**Low degree of competitiveness**
$REC_i < 0.4001$	**Very low degree of competitiveness**

Source: author's elaboration

An analysis of the ranking of ATUs across all RECI's criteria revealed that only one district, Donduseni, ranked among the top 10 districts with the highest competitiveness levels across all six pillars in 2024 (Table 4.20). All other districts ranked highly in some pillars but lower in others. For example, Criuleni district ranks first in the competitiveness pillar of Growth Dynamics and Intangible Potential, and second in Productivity and Resource Efficiency. Meanwhile, this district ranks 24th in Entrepreneurial Base and Labor Engagement, and 28th in Financial Stability and Capital Structure.

Table 4.20. Rank of enterprise competitiveness by Administrative-Territorial Unit, 2024

ATU	Rank							Degree of REC
	Pillar 1	Pillar 2	Pillar 3	Pillar 4	Pillar 5	Pillar 6	RECI	
Balti municipality	28	2	23	28	14	6	16	**Medium**
Briceni	25	10	18	1	9	12	5	**High**
Donduseni	6	4	9	7	7	2	1	**Very high**
Drochia	35	28	5	27	2	11	21	**Medium**
Edinet	34	7	8	15	13	32	23	**Low**
Falesti	27	17	33	21	20	31	30	**Low**
Floresti	32	34	19	20	15	14	31	**Low**
Glodeni	8	8	35	33	32	21	29	**Low**

Ocnita	3	5	24	3	19	5	4	**High**
Riscani	19	25	20	18	6	20	20	**Medium**
Singerei	33	33	27	22	29	30	34	**Very low**
Soroca	18	31	26	30	18	24	27	**Low**
Chisinau municipality	26	3	16	24	5	4	6	**High**
Anenii Noi	30	14	7	2	11	18	11	**High**
Calarasi	20	30	30	4	22	17	22	**Medium**
Criuleni	7	24	2	9	28	1	2	**Very high**
Dubasari	24	29	1	6	33	8	10	**High**
Hincesti	14	22	6	25	12	7	13	**Medium**
Ialoveni	22	21	4	19	21	16	17	**Medium**
Nisporeni	29	19	29	10	1	23	15	**Medium**
Orhei	31	20	22	26	26	19	28	**Low**
Rezina	21	27	14	8	3	35	18	**Medium**
Straseni	4	13	10	16	23	27	12	**High**
Soldanesti	12	26	21	5	16	29	14	**Medium**
Telenesti	23	35	13	31	4	22	24	**Low**
Ungheni	15	32	28	34	27	10	33	**Very low**
Basarabeasca	17	11	34	23	35	9	32	**Very low**
Cahul	5	6	25	13	8	28	9	**High**
Cantemir	2	12	31	35	34	34	35	**Very low**
Causeni	13	23	17	29	31	26	25	**Low**
Cimislia	1	15	3	17	25	15	7	**High**
Leova	16	18	32	32	30	3	26	**Low**
Stefan Voda	11	9	11	11	17	25	8	**High**
Taraclia	10	1	15	12	24	13	3	**High**
ATU Gagauzia	9	16	12	14	10	33	19	**Medium**

Source: author's calculation

Such a wide dispersion of rankings for the same ATUs, but based on different competitiveness criteria, indicates that for most districts, the achieved level of competitiveness does not guarantee its maintenance. Moldovan enterprises' competitiveness is only short-term. Therefore, a more in-depth analysis of enterprise competitiveness in terms of Growth Dynamics and Intangible Potential allows us to assess the potential for further competitiveness improvement. It revealed that only four of 35 districts have a high or very high level of this kind of competitiveness.

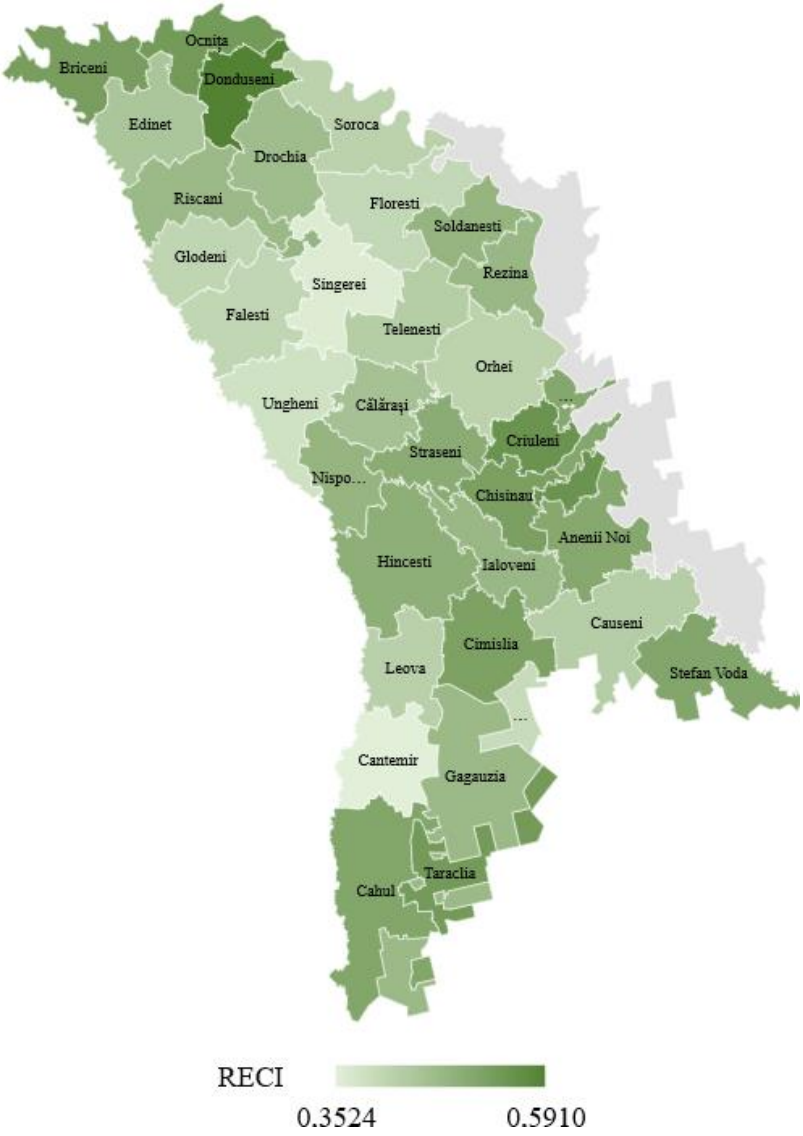

Figure 4.2. ***Regional Enterprise Competitiveness Index, 2024***
Source: author's elaboration

An analysis of the Regional Enterprise Competitiveness Index map showed that most districts with high competitiveness are located either along the national borders, where customs checkpoints with significant flows of goods are located, or in districts with commodity centers and intensive freight transport routes, as well as in the capital and districts adjacent to it (Figure 4.2). In 2024, the highest level of competitiveness in the northern region was recorded by enterprises in Donduseni, Ocnita, and Briceni districts.

The economies of the northern districts of Donduseni (ranked 1), Ocnita (ranked 4), and Briceni (ranked 5) are largely diversified due to their agricultural processing capacities. An agro-industrial cluster has developed in Donduseni district, where enterprises engage in both crop cultivation and processing. Large volumes of crop and livestock products are produced in the district, including grains, industrial crops (sugar beet and sunflower), fruits, and eggs.

However, it should be noted that although this district ranks among the leaders in competitiveness and possesses considerable development potential, numerous obstacles to further growth remain. Despite its potential and the large-scale cultivation of sugar beets, the sugar factory "Zahăr-Dondușeni" ("Magt-Vest") went bankrupt. As noted earlier, this situation reflects the challenges associated with Moldova's orientation toward the European market, where competition is particularly intense. Under such conditions, the bankruptcy of large enterprises with outdated equipment and limited access to affordable (cheaper) energy resources becomes increasingly likely. The lack of access to low-cost energy resources and intense market competition limit enterprises' ability to accumulate sufficient capital to modernize production processes.

Currently, the following enterprises are active in Donduseni district: Rom Cris and Avicola Teovera, Climautanul-Agro, Frukt-Laine, Exportfruct, Curtea Dacilor, and Recom-Grup. Rom Cris is the largest egg producer in Moldova, equipped with modern technology and equipment, and exports eggs to the European Union market. Avicola-Teovera is a poultry farm that uses automated poultry farming systems and is part of a family business (the Rom-Cris). Climautanul-Agro is one of the largest agricultural enterprises, cultivating grains,

legumes, and oilseeds, and operating its own grain elevator.

The agricultural enterprise Frukt-Laine cultivates fruits and seed crops and operates a cold storage facility for fruit sorting and packaging. Exportfruct is an enterprise specializing in the purchase, storage, sorting, and preparation of fruits and vegetables for wholesale trade and export, as well as other agricultural products. The enterprise Curtea Dacilor is equipped with a grain elevator and specializes in the wholesale trade of agricultural products, not only grain, but also feed and unprocessed tobacco. The enterprise Recom-Grup operates a sunflower processing unit that produces sunflower kernels for the food industry and for export. This enterprise's products are exported to EU countries.

In the central region, enterprises located in the capital, Chisinau municipality, as well as in the districts surrounding the capital, such as Criuleni and Straseni, are among the most competitive. Hincesti district borders Romania. A customs checkpoint is in Leuseni through which a significant flow of international trade passes. However, this district is not in the green competitiveness area (high degree of REC), but rather in the yellow one (medium degree of REC), ranking 22nd in the Entrepreneurial Base and Labor Engagement sub-index. Given that the distance between Chisinau and Hincesti can be covered in approximately 30–35 minutes by car, some residents of Hincesti work for enterprises located in Chisinau. At the same time, certain specialists, for example, in the healthcare sector, who reside in Chisinau, work part-time at Hincesti medical institutions. Overall, more residents of Hincesti district are employed by enterprises located in Chisinau than residents of the capital who are employed by enterprises in Hincesti district.

Four of the ten ATUs in the southern region are highly competitive. Two of these districts host customs checkpoints: Cahul and Stefan Voda (Palanca and Tudora). Of the four districts with the lowest competitiveness levels (the red area), two are located in the southern region. This further illustrates the regional polarization of the Moldovan economy.

Conclusion

The newly developed competitiveness indices enabled a deep analysis of enterprises' competitive advantages across economic sectors and ATUs. The analysis revealed sectoral imbalances in the national economy, which undoubtedly pose a barrier to sustainable economic development. Moldova is an agricultural country, and its agricultural sector is in the red area in terms of competitiveness. Of the 19 sectors, ten have low or very low competitiveness. Capital- and energy-intensive sectors are uncompetitive, as is expected. Therefore, the Moldovan economy's sectoral structure is characterized by the dominance of the service sector. Competitive enterprises are also in Sector J: Information and Communication, which are financially stable. Addressing sectoral imbalances in the economy requires large-scale capital investment and technological modernization. However, competitive sectors should not be overlooked.

An analysis of enterprise competitiveness at Administrative-Territorial Unit levels revealed that regional polarization is increasing in Moldova. Enterprises located in specialized clusters (Donduseni district), in districts with customs checkpoints with the intensive international transport traffic (Ocnita, Briceni, Stefan Voda, Cahul, and Hincesti districts), and in Chisinau municipality and the districts surrounding the capital are more competitive. Enterprises from districts located far from major trade flows have the lowest competitiveness. Inequality in regional enterprise development creates serious risks for economic stability, economic growth, and social equality.

A synthesis of sectoral and regional analyses of enterprise competitiveness enabled the identification of the main obstacles to sustainable economic development. The first obstacle is the country's low level of scientific and technological development. The state expenditure for research and development activity amounts to only 0.22% of GDP. As a result, enterprises are forced to purchase modern equipment abroad. However, such purchases require foreign currency, which can be earned primarily through exports. At the same time, the main export market for Moldovan enterprises is the European market, where competition with firms equipped with modern technologies is

extremely intense. This creates a vicious circle that is difficult to break without state support.

The second obstacle is the shortage of skilled labour. The country's demographic situation is challenging, as the working-age population is declining due to both lower birth rates and emigration. Population ageing does not contribute to stable economic growth, because a key driver of GDP growth is an increase in the share of the working-age population. Moreover, a part of the working-age population is either employed abroad or works in the informal sector. It therefore does not pay taxes, which negatively affects the state budget and contributes to the growth of external debt.

The third challenge faced by enterprises in Moldova is the high and volatile prices of energy resources. To mitigate this challenge, further development of the renewable energy sector is necessary, as it has demonstrated a steady increase in electricity production in recent years.

Digitalization is essential for improving the competitiveness of Moldovan enterprises. International practice offers a wide range of tools that can be adapted for Moldovan businesses. To optimize business processes, they should be integrated into a unified digital management system. Appropriate tools include ERP systems (Enterprise Resource Planning), CRM systems (Customer Relationship Management), and e-invoicing solutions. The digital transformation of enterprises can significantly improve management efficiency and the quality of managerial decision-making. Technologies such as Big Data, business analytics (BI), artificial intelligence, and machine learning can support this process. Furthermore, e-commerce platforms and digital marketing can help enterprises expand their markets. At the same time, Industry 4.0 technologies, such as the Internet of Things (IoT), smart manufacturing systems, and robotics, can be applied to optimize production processes.

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