

TRENDS IN THE DEVELOPMENT OF SMALL AND MEDIUM-SIZED ENTERPRISES: CASE OF MOLDOVA

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Abstract: *The effective activity of small and medium-sized businesses is one of the conditions for ensuring a high level of competitiveness in the national economy and creating new jobs, which, as a result, increases the level of employment in the country. Small and medium-sized businesses quickly respond to changes in market conditions and external factors, such as economic, financial, and geopolitical crises, protectionist policies, and tax policies of trading partners. In this scientific work, our primary objective is to delve into the trends and prospects for developing small and medium-sized businesses in Moldova, aiming to provide a comprehensive understanding of the current situation and future possibilities. The methodological basis of the study was made up of general scientific methods: analysis and synthesis, comparison and generalization, statistical analysis, and correlation and regression analysis. The energy crisis in the fall of 2021 has significantly impacted the entrepreneurial sector, particularly in the central region, namely in the district of Ialoveni, near Chisinau. This study's focus on the impact of energy resource prices on the evolution of SMEs is of significant importance in Moldova's current economic landscape.*

Keywords: *entrepreneurial sector, competitiveness, energy crisis, competition.*

JEL Classification: *M20, M21.*

1. Introduction

SMEs (Small and Medium-sized Enterprises) in Moldova are the most essential element of the economy, making up 99.2% of total enterprises. This sector ensures the formation of a competitive environment and the creation of jobs and conditions for implementing entrepreneurial initiatives. The work's relevance lies in the fact that the development of SMEs is one of the determining factors of economic growth. The study's theoretical basis includes an analytical review of scientific works on developing small businesses and the energy crisis. The methodological basis of the study was made up of general scientific research methods, such as analysis and synthesis, comparison and generalization, correlation and regression analysis.

This study aims to identify trends and factors influencing the dynamics of the SME sector in Moldova. The emphasis is on the energy crisis, which caused high levels of inflation, and since household incomes did not increase by the same percentage as the price index, the solvency of the population decreased. Declining demand and inflation led to the bankruptcy of some enterprises. The most significant decrease in small and medium-sized enterprises was observed in areas close to Chisinau. Due to the energy crisis, costs increased, and not all enterprises could cope without going bankrupt. Studying the impact of energy prices on the development of small businesses is one of the objectives of this work. The novelty of this study is that the effect of the energy crisis on the SME sector in Moldova has not been analyzed and evaluated before.

2. Literature review

Without exception, specialists in the field of SMEs write about the role of SMEs in the economy and increasing competition (Petkovska, 2015, p. 55). The competition encourages enterprises to increase their competitiveness (Gutium, 2017). Most researchers agree that for the sustainable development of small businesses, it is necessary to improve entrepreneurial skills and increase investments. The state should facilitate the influx of foreign direct

investment and reduce bureaucratic obstacles to entrepreneurship (Voronkova et al., 2018). In addition to the measures listed, some experts propose increasing access to bank loans (Gutium & Speian, 2022). Roshan Rassool and Ravindra Dissanayake believe that SMEs have limited financial resources and are also limited in qualified employees (Rassool & Dissanayake, 2019, p. 59).

Since the beginning of the era of economic digitalization (Goldfarb & Tucker, 2017), more and more works have appeared devoted to the digitalization of small and medium-sized businesses. Digital transformation as a strategic initiative benefits SMEs (Rassool & Dissanayake, 2019, p. 59). D.V. Polyatsky explored modern “trends in the development of SMEs in the context of digital financial products developed as part of fintech innovations” (Polyatsky, 2023, p. 31). To build an information society, it is necessary to implement electronic commerce (Gapar & Awallidin, 2011).

There are relatively few scientific works on constructing a model for forecasting the development of SMEs, and only a few are for Moldova. V. Ganciuov developed the first model for forecasting the evolution of SMEs in Moldova; it contains 39 variables, of which 30 are exogenous, and nine are endogenous (Ganciuov & Gutium, 2021). The forecasting model developed by Erik Avanesian shows that increased spending on research and development, information technology, and urbanization policies makes it possible to achieve stable growth in the small business sector (Avanesian, 2022, p. 238). S.V. Doroshenko and A.G. Shelomentsev used econometric methods to estimate the number of youth as a factor in small business development (Doroshenko & Shelomentsev, 2019).

The first works on studying the impact of the energy crisis on the economy and the population's well-being appeared immediately in the year of the crisis (Gutium, 2021). However, the first results of studying the impact of the energy crisis on the small business sector were published last year (Yue, 2023). However, the effect of the energy crisis on SMEs in Moldova has not yet been studied, so one of the objectives of this study is to assess this impact.

3. Evolution of SMEs in Moldova and the influence of the energy crisis on SME activity

Starting on December 2, 2022, the new division criteria for the small and medium enterprises sector came into force (Table no. 1). Therefore, the series of statistical data was interrupted. The National Bureau of Statistics in Moldova (NBS) has recalculated according to the new criterion, only the data for 2021.

Table no. 1. Curent clasification of SMEs, Moldova

Classification criteria	Size of enterprise		
	Micro-enterprise	Small enterprise	Medium-sized enterprise
<i>The old division criteria</i>			
The average annual number of employees, person	1 – 9	10 – 49	50 – 249
Annual turnover, mil. lei	up to 9	up to 25	up to 50
Total assets, mil. lei	up to 9	up to 25	up to 50
<i>The new division criteria</i>			
The average annual number of employees, person	1 – 9	10 – 49	50 – 249
Annual turnover, mil. lei	up to 18	up to 50	up to 100
Total assets, mil. lei	up to 18	up to 50	up to 100

Source: Systematized by the author based on the Law no. 179/2016.

The number of medium-sized enterprises decreased by 7.81% in 2022 compared to 2021, and the number of small enterprises decreased by 9.33% (Fig. no. 1). Simultaneously, the number of micro-enterprises increased by 5.92%. This is because small enterprises have moved into the category of micro-enterprises. One of the reasons is the energy crisis, which caused not only an increase in tariffs for energy resources but also prices for other goods and services, which provoked an increase in production costs and a decrease in demand due to a decrease in the solvency of the population. In such cases, the market dictates a decrease in supply and cost reduction, and the most “painless way” for an entrepreneur is to reduce the number of employees. Small enterprises become micro-enterprises when the number of employees decreases to less than 10.

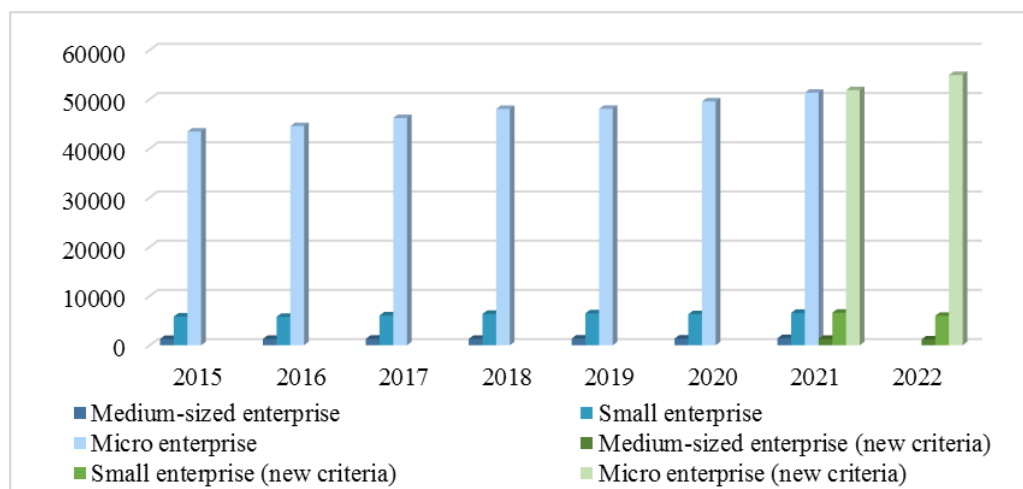


Figure no. 1. Number of SMEs in Moldova, 2015-2022

Source: NBS, 2023.

The situation is similar regarding the number of employees in SMEs; in medium-sized enterprises, the number of employees decreased by 3.56% in 2022 compared to the previous year. The number of employees in small enterprises fell by 2.94%, while in micro-enterprises, it increased by 11.87% (Fig. no. 2).

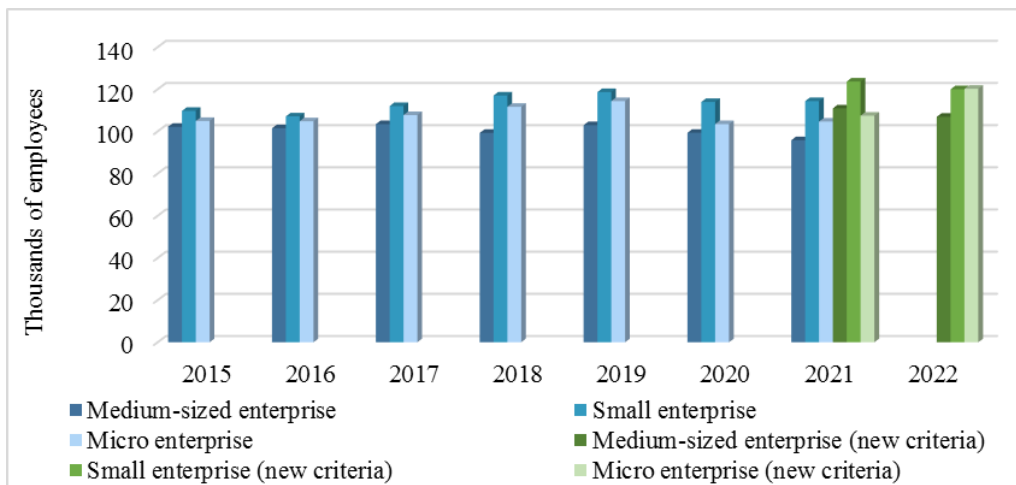


Figure no. 2. Number of employees of SMEs in Moldova, 2015-2022

Source: NBS, 2023.

The share of jobs created by SMEs in the total number of jobs in the country varies between 37% and 41% in the analyzed period. In 2022, the SME sector provided 40.27% of jobs in the country. The share of jobs created by medium and small enterprises decreased by 5.68 and 5.07 percentage points, respectively. The opposite trend is observed in the share of jobs created by micro-enterprises in the total number of jobs in the country; it increased by 9.42 p.p. (Fig. no. 3).

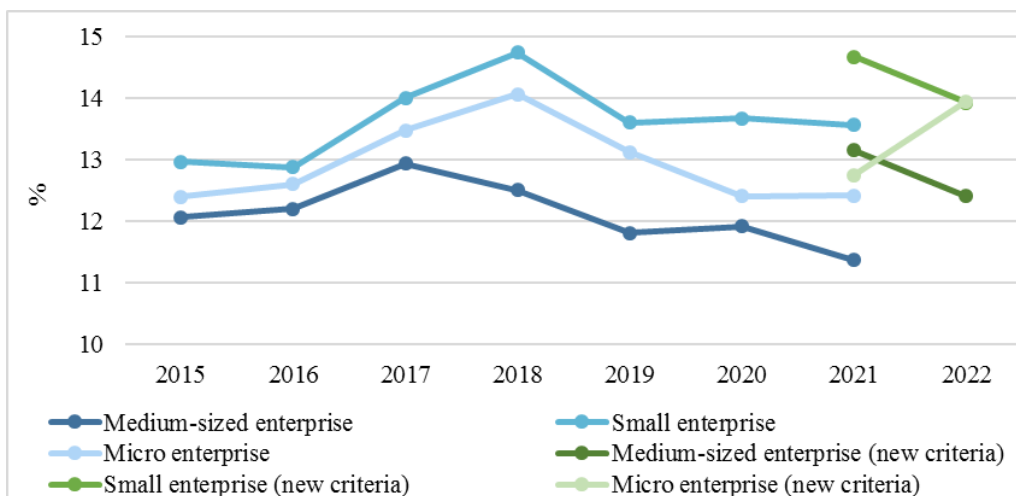


Figure no. 3. The share of jobs created by SMEs (by the size of enterprises) in the total number of jobs in the country, 2015-2022

Source: Author's calculations based on NBS data.

We should analyze SME turnover dynamics to characterize SMEs' activity and economic efficiency. Since the NBS provides data on turnover in current prices, an increase in turnover of all types of enterprises was recorded in 2022 (Fig. no. 4). It should be noted that the turnover of medium-sized businesses is unstable; in 2018, a decrease in turnover of

498.2 million lei was recorded (NBS, 2023). In 2020, a decrease in turnover was recorded for all types of enterprises. The main reason is quarantine measures during the COVID period.

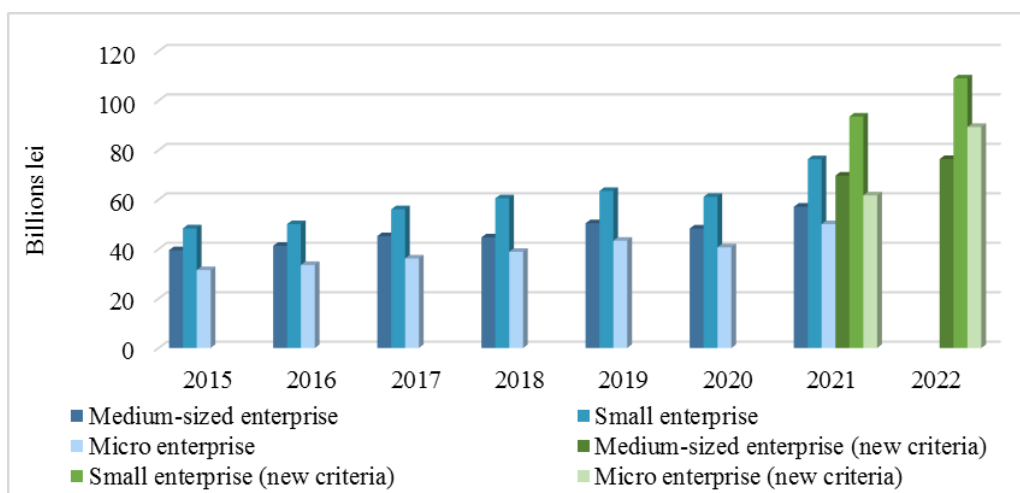


Figure no. 4 Turnover of SMEs in Moldova, 2015-2022

Source: NBS, 2023.

An analysis of the main economic indicators of SMEs showed that their changes are unstable. There are both positive and negative results. The period of the COVID-19 pandemic, although it brought considerable losses to the accommodation, food, and beverage service activities, led to the development of courier services and the acceleration of digitalization of the economy. The analysis of SME dynamics by region showed that the energy crisis had the most significant impact on SMEs in the center region, in the district near Chisinau (Ialoveni, Hincesti).

4. The forecast model of the medium-term entrepreneurship activity in Moldova

Applying the theoretical and empirical studies and based on the availability of statistical data, nine endogenous variables and 25 exogenous variables with different degrees of impact on the endogenous variables were selected. The final forecast model already contains 14 exogenous variables and three blocks (Table no. 2).

Table no. 2.

The variables of the forecasting model of entrepreneurial activity, by blocks

Endogenous variables	Exogenous variables
Block "Main economic indicators of entrepreneurial activity"	
<i>tne</i> – The total number of enterprises in Moldova, thousands of units;	<i>gdpi</i> – Gross Domestic Product per inhabitant, current prices, thousands lei;
<i>nsme</i> – Number of SMEs, thousands of units;	<i>ex</i> – Export volume, billion US dollars;
<i>te</i> – Average number of employees (total by all sizes of enterprises), million people, mil. per.;	<i>linv</i> – Long-term financial investments (all sizes of enterprises), billion US dollars;
<i>smee</i> – Average number of SME staff, mil. per.;	<i>young</i> – Annual average number of young people (18-35 years old) with usual residence, mil. per.;
<i>ft</i> – Financial result before taxation.	<i>gs</i> – Average monthly gross salary,

Profit (+) losses (-), total by all sizes of enterprises, billion lei; <i>fsme</i> – Financial result before taxation. Profit (+) losses (-), SME, billion lei.	thousands lei; <i>exch</i> – Average annual exchange rate, lei/US \$; <i>newloan</i> – Volumes of new loans granted (total by banking sector), billion lei; <i>rnl</i> – Weighted average nominal interest rate of new loans granted (total), %. <i>d20</i> – Dummy variable for 2020.
Block “Turnover”	
<i>tt</i> – Turnover (total by all sizes of enterprises), billion lei; <i>tsme</i> – Turnover, SME, billion lei.	<i>nsmei</i> – The number of SMEs per 1000 inhabitants of Moldova, enterprises per 1000 inhabitants; <i>gs</i> – Average monthly gross salary, thousands lei; <i>imp</i> – Import volume, billion US dollars; <i>exch</i> – Average annual exchange rate, lei/US \$; <i>newloan</i> – Volumes of new loans granted (total by banking sector), billion lei.
Block “SME Loans”	
<i>loansme</i> – Total loans granted to SMEs, billion lei.	<i>cpi</i> – Consumer Price Index, %; <i>rr</i> – Minimum reserve requirements, %; <i>irl</i> – Interest rate on loans, %.

Source: Elaborated by author.

The model compilation was performed using EViews 9.5 software. Statistical tests were applied to check the quality of the developed model's regression equations: R-squared, Adjusted R Square, F-statistic, Akaike Information Criterion, Schwarz Criterion, and Durbin-Watson statistic. The study of the residuals makes it possible to assess the correctness of the model and the degree of reliability of the forecasts. Therefore, the presence of autocorrelation in the model was tested. Heteroscedasticity is when the errors in a regression model do not have a constant dispersion. The Goldfeld–Breusch–Pagan test was applied to check whether or not heteroscedasticity of the residuals occurs. The final version of the forecast model is presented in Table no. 3.

Table no. 3. The forecast model of the medium-term entrepreneurship activity in Moldova

Block “Main economic indicators of entrepreneurial activity”
$\ln(tne) = 3.26 + 0.177 \ln(gdpi) - 0.123(exch) + 0.102 \ln(gs)$ $\ln(nsme) = 3.53 + 0.24 \ln(gdpi) - 0.19 \ln(exch)$ $\ln(te) = 0.037 \ln(ex) - 0.234 \ln(exch)$ $\ln(smee) = -3.59 + 3.94 \ln(gs) - 0.43 \ln(rnl) + 10.51 \ln(young)$ $\ln(ft) = 9.329 \ln(linv) - 3.474 \ln(newloan) - 6.588 \ln(exch) - 0.91d20$ $\ln(fsme) = -58.95 + 16.03 \ln(nsme) - 1.00 \ln(newloan) - 0.61d20$
Block “Turnover”
$\ln(tt) = 2.032 + 0.27 \ln(gs) + 0.739 \ln(exch) + 0.573 \ln(imp) + 0.09 \ln(newloan)$ $\ln(tsme) = -5.05 + 2.18 \ln(nsmei) + 1.20 \ln(exch)$

Block “SME Loans”
$loansme = 23.02 + 0.21 \times cpi - 0.68 \times irl - 0.16 \times rr$

Source: Elaborated by author.

The elaborated forecasting model was used to forecast Moldova's entrepreneurship activity in the medium term 2024-2026. The results of the forecasting number of employees and turnover are presented in Fig. no. 5.

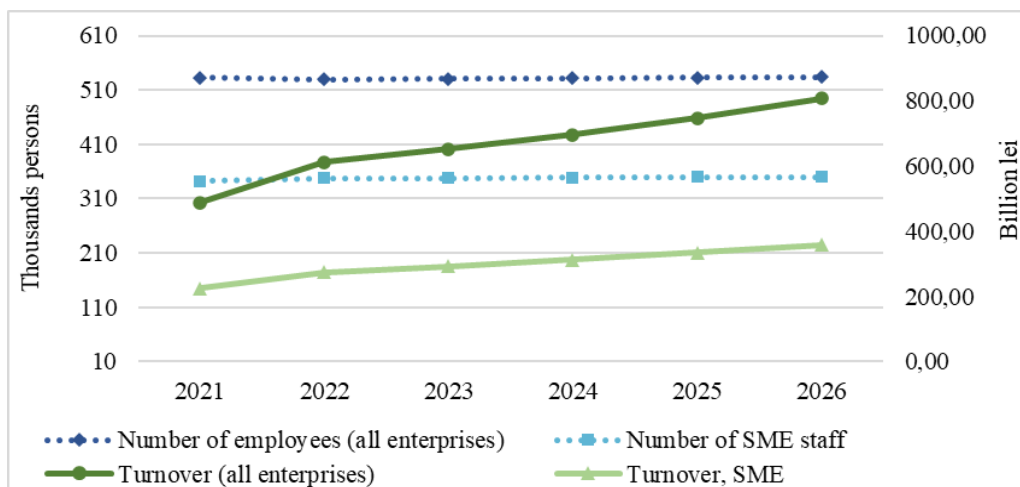


Figure no. 5. The number of employees and turnover, 2021-2026 (forecast 2024-2026)
Source: Elaborated by author.

SMEs in Moldova currently operate in conditions of insufficient capital. These businesses are offered bank loans at a high-interest rate that exceeds the rate of return. The SME requires capital investments for its technical retooling, the implementation of high-performance technologies, and, as a result, an increase in sales volume. The model demonstrates that SMEs' access to credit significantly depends on the monetary policy decisions of the National Bank and the anticipated inflation rate.

5. Conclusions

Analysis of the current trend in the development of SMEs and the results of forecasts showed that the main economic indicators of their development (number of enterprises, average annual number of employees) will grow slowly. Value indicators (turnover, financial result before taxation) will increase mainly due to rising prices and lower labor costs, which have limitations. Achieving significant results for SMEs is only possible in the long term by promoting support for the SME sector by the state.

It should be noted that not only the implementation of a national project but also the active introduction of digital technologies can contribute to the growth of SMEs. During the pandemic period, an increase in demand for the purchase of online products, demand for courier services, and the use of digital services was registered. The energy crisis hit the development of SMEs; small enterprises reduced the number of employees and turnover at constant prices, which led to the transition of these enterprises from small to micro-enterprises.

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