

FINANCIAL PERFORMANCE ANALYSIS FROM A SOCIAL WELFARE PERSPECTIVE - A COMPARATIVE STUDY ROMANIA-MOLDOVA

*Monica-Laura ZLATI (SORICI)¹
Svetlana MIHAILA²
Veronica GROSU³*

Abstract: *Under conditions of uncertainty, the financial performance of a state (which is the attribute of the state's assurance of welfare through the contribution of economic activity to the financial-budgetary vectors) changes in relation to the influences of uncertainty factors and the response of the entropy of the system to the social protection measures adopted by the authorities in response to the crisis. Thus, in the opinion of the authors, the financial performance can be quantified according to the capacity of the resources to satisfy the financial needs, in an equitable measure, based on the allowed access, in the presence of protection against financial risk and through the sustainable consumption of resources. We propose to develop a model for assessing financial performance under uncertainty based on the consumption vector represented by the average monthly cost felt by the employer. The methods used are prospective (literature study) and analytical (consolidation of a Romania-Moldova parallel database for relevant macroeconomic indicators: active population, Total state companies' revenues of, Number of state companies, Number of employees, Total national income). The results of the study materialize in the assessment of economic development patterns influencing financial performance by creating parallel correlations with effect in delineating the influences of endogenous and exogenous factors on the financial performance of the two countries.*

Keywords: *financial performance, analysis, econometric model*

JEL Code: *I31, R13*

Introduction

The average monthly cost is an aggregate statistical indicator that is monitored by the official statistical websites (Biroul National de Statistica al Republicii Moldova, 2022; Institutul National de Statistica al Romaniei, 2022) of the two countries and that during the pandemic period and under the impact of the current geopolitical risks has continued to increase, the main causes being the energy crisis, the economic recession, inflation and rising prices of raw materials and utilities.

Social welfare is a national goal that includes access to a basic package of services in terms of access to utilities, access to basic health systems, access to adequate nutrition and access to social services for education. Thus, according to statistics, Romania ranks 52nd in the world (The Social Progress Imperative, 2021) in terms of nutrition and basic health systems with a standard deviation from the overall ranking of 11 places. It also has low

¹ *Monica-Laura ZLATI (SORICI), drd, ASEM, Chisinau, Moldova. & Ștefan cel Mare University, Suceava, Romania, E-mail: sorici_monica@yahoo.com ORCID: 0000-0003-2443-1086*

² *Svetlana MIHAILA, dr, Doctor of Economics, Associate Professor, ASEM, Chisinau, Moldova. E-mail: svetlana.mihaila@ase.md ORCID: 0000-0001-5289-8885*

³ *Veronica GROSU, Ph.D., university professor, Ștefan cel Mare University of Suceava, Romania, E-mail: veronica.grosu@usm.ro ORCID: 0000-0003-2465-4722*

ratings in terms of access to basic knowledge, ranking 73rd in the world, and the most affected components are legal access to education and early schooling, which lead Romania to rank 107th respectively 113th in the world. Another deficit aspect is access to specialized health care where Romania ranks 98th in the world and pollution with effects on the health of the population where Romania records a deviation from the general ranking of 33 places. Other problems are legal access to quality health services and premature deaths from non-communicable diseases. Romania's population has a life expectancy below the European average, being ranked 72nd in the world. From the social inclusion point of view, a deficit aspect is the socio-economic status and young people out of education and unemployed.

According to the same study, Moldova ranks 64th in the world in terms of basic needs, access to specialized health services is diminished, and the perceived crime rate is also deficient in public health. In terms of access to basic knowledge, in Moldova it is noted that a deficit aspect is represented by early schooling, also there are shortcomings in terms of access to information and communications through the low rate of mobile communications that places Moldova on 125th place in the world.

As in the case of Romania, there are shortcomings in terms of premature death due to non-communicable diseases. Moldova ranks 142nd in the world in terms of the number of young people not in education, employment or training. Also, early marriage, discrimination and violence against minors and the environmental level of university education is a problem.

In an economy in recession, the increase in these costs has generated additional social protection measures that have had the effect of further burdening crisis-hit national budgets. From the results point of view, it can be observed from the official reports which both in the Romanian and Moldovan economy, the growth in the number of companies has materialized almost constantly over the period 2011-2020, which allowed them and an expansion of turnover. At the level of 2020 compared to 2019 we observe the first negative inflection of change in company revenues in the sense that they suffered a reduction of 2% in Romania and 5% in Moldova. Unemployment expressed by a reduction in the number of employees is also an element associated with the economy in conditions of uncertainty, and we have observed that both in Romania and Moldova the number of employees during a recession decreases by 3 to 6%.

In 2017, the European Commission presented the European Pillar of Social Rights, composed of 14 core indicators (European Platform for Rehabilitation, 2022) that addressed issues of income inequality and inequality of opportunity. In recent years, the issue of income inequality of European citizens has become an important one. The effects of the economic, pandemic and food crises on European citizens have been profound, with significant changes in living standards, generating considerable pressure on social protection systems. These changes have led to increasing inequality in European countries, with consequences for economic sustainability and social cohesion. The recent crises have had an impact on all countries, both rich and emerging, with a direct effect on narrowing the wealth gap between them, but in the medium and long term, the consequences of the crises could affect emerging countries to a greater extent.

These premises motivate the general objective of the study, i.e. to evaluate the financial performance from a sustainability perspective for the two countries, whose economic characteristics differ both in terms of Romania's accession to the European Union, which

implies the assumption of certain rules and norms in terms of sustainable development, and in terms of government management, a component that differentiates the two countries in terms of both financial and social policy.

The specific objectives of the study are:

O1: identifying the main models for quantifying performance under uncertainty presented in the literature and critically analysing them;

O2: identifying elements impacting performance and consolidating parallel databases for the two countries;

O3: conceptualizing the econometric model for quantifying financial performance for Romania and Moldova;

O4: disseminating the results of the model.

In the following, we will present the relevant elements from the literature review, the methodological aspects that were the basis for the construction of the financial performance evaluation model, the modelling results and the discussions based on them. The conclusions of the study will capture the contribution of the model to increasing economic predictability and possible limitations of the model.

1. Literature review

The literature captures performance in a variety of forms, the most common of which are concerned with the relationship between sources of finance and its effects. Thus in an interesting approach (Zhou et al., 2019) show that the competitiveness of financing depends on the sources of allocation and how they are streamlined in the allocation stages based on the forecasts made by the decision makers making the allocation. Another approach to optimization under uncertainty (Bakker et al., 2020) shows that refining analysis methods from traditional staging-based methods to modern algorithm-based methods and segregating endogenous from exogenous variables can lead to optimizing the allocation decision under uncertainty, generating solutions to some seemingly intractable problems.

The analysis of financial performance in relation to risk monitoring management practices with dynamic transmission is conducted by (Singh, 2020) who shows that considering the overall risk exposure of organizations has a direct negative impact on performance, and risk distribution practices in the economic network of customers and suppliers are tools that motivate the adoption of additional monitoring measures to mitigate this vulnerability.

Competitiveness is also an attribute of adaptation to current conditions (Bakker et al., 2020; Dobson & Waterson, 2003; Li et al., 2020; Zhou et al., 2019), i.e. global digitalization, global distribution chains, controlled optimization, which creates the conditions for a proactive approach to managerial and marketing practices, so that the uncertain context affects competitiveness in a more controlled way (Tseng et al., 2021). Also, (Dragomirescu-Gaina et al., 2021) bring to attention other important aspects of performance, consisting of decision synchronization and information filtering techniques, in order to improve the quality of predictions while increasing the reaction speed of managers. The proposed model shows that in the case of a systemic approach to risk, the consistency of decisions is much higher than the measures previously adopted in times of uncertainty (Abdel-

Basset et al., 2020). Another very important aspect of performance is the triangle of CSR stakeholders' interest and financial performance (Asongu et al., 2019; Awaysheh et al., 2020; Socoliuc et al., 2020). Under uncertainty conditions, the authors (Hunjra et al., 2020) show that in terms of capital structure affected by uncertainty financial performance is weakened vectorially under the action of 3 influencing factors, namely: uncertainty conditions, CSR decrease, stakeholder interest decrease through reduced return on investment.

An exploratory questionnaire-based study looks at financial performance in relation to CSR from a different perspective. The authors (Buzgurescu & Elena, 2020) show that CSR brings benefits to the local community, increasing interest in increasing the intellectual capital of the organization. It means to improve financial and non-financial performance, which increases both productivity and economic sustainability of companies that adopt these modalities. In pandemic conditions, several destructive effects on performance were recorded, thus (Achim et al., 2021) show that the financial market of listed entities in Romania suffered a contraction of 37.43% between June 2019 and June 2020, with an indirect effect on social welfare. The main causes may lie in capital financing, liquidity shortages and asset utilization policy, on which the pandemic period has acted disruptively. All these vulnerabilities should be corrected in order to improve financial predictability and decrease the risk exposure of entities.

An interesting approach (Sabău Popa et al., 2021) aims at creating a composite index to predict financial performance. According to the authors, performance can be expressed on the basis of derived financial indicators (EPS, ROA, ROE and solvency), which then have to be compared with the values obtained by applying valuation methods, after which the data are refined by spectral analysis, resulting in the composite financial performance prediction index. This is an interesting, usable tool in practice that increases the quality of predictions and can be an aid to managerial decision makers.

The assessment or prediction of the risk of bankruptcy of Romanian companies is analyzed by (Buzgurescu & Elena, 2020) who perform an analysis based on the scoring functions of some large companies in Romania (11 companies) in the period 2015-2017 and according to this analysis it results that about 50% of the sample analyzed have worsened their risk indicators which is an alarm signal on the financial situation of economic agents in Romania especially since the period in which the study was conducted was one of apparent calm without the influence of the recession. A questionnaire-based study (Popescu & Popescu, 2019) aims to assess the performance of the business system from a CSR and Sustainable Green perspective, thus the authors show that business development depends on infrastructure development that creates continuous growth, business expansion opportunities and robust sustainable development. Another direction of development is access to finance and connection to international projects in order to optimally transfer energy and reduce the risk of limiting business in relation to the potential generated by globalisation. The third direction aims at creating a more stable financial system, the authors starting from the premise that financial integration and capital market integration can help EU member countries overcome the impact of financial crises by stabilising financial markets. The fourth direction aims at deep financial integration and increased competition with the resulting advantages of diversifying financial sources and decreasing funding sources.

An analytical approach based on the Fuzzy model of performance is carried out by (Ban et al., 2020) which separates financial and non-financial performance and performs a financial ranking based on financial indicators. The findings of the study show that on the basis of increasing competition in the business environment a ranking tool can help economic decision-makers in changing strategies and increasing competitiveness with indirect social effect.

Another interactive approach to financial performance in the presence of management risk assessment and financial characteristics of the business brings to attention a SEM (structural equation modelling) methodology that determines the Gaussian pattern of performance distribution based on 13 management characteristics and management policies (corporate governance and CSM). Thus the authors show that the characteristics of the management team and the financial risk assimilated to the management affecting performance evolve in a dynamic relationship of direct dependence, and on the other hand corporate governance and financial risk affecting performance are correlated through the prism of financial indicators of results and sustainable development (Oncioiu et al., 2020).

Uncertain conditions bring to the attention of researchers the thorny issue of rising unemployment rates (Davidescu et al., 2021). The authors point out that this phenomenon is a result of uncertainty events such as the declining Covid-19 pandemic and it has a significant impact on future social policies adopted by government decision makers. The authors model the phenomenon using additive statistical and forecasting methods, showing that the seasonal pattern of unemployment rates is particularly evident at the beginning of the year and at the beginning of the fourth quarter, with forecasting elements showing that in the short and medium term the seasonal variation tends to flatten, with the Romanian market assimilating experiences in human resource management, which has a significant impact in reducing the seasonal nature of unemployment and stabilizing the market. Other authors (Davidescu et al., 2020) show that performance in relation to work productivity can be achieved under conditions of improving employee satisfaction with the work performed and increasing the flexibility of working hours, aspects that are able to improve employee motivation.

Another study analyzes in a Romania-Moldova-Ukraine parallel the need for vocational training of employees of small and medium-sized companies, the authors (Chaşovschi et al., 2021) concluding that there is a general need for vocational training that manifests itself in the three regions, this aspect being based on an observational study according to which more than 25% of employees of the studied organizations have participated in at least one vocational training program in the last 3 years. The authors also show that in more than 25% of cases there is a budget allocated for employee training. Another interesting finding of the study highlights that employees are aware of the competitive requirements of the labour market and at least 50% of them want to improve their skills by attending vocational training courses. As a result of the study, there were also differences in the need for training in the three regions but these differences are related to the economic specificities of each region and the socio-economic conditions in each country/region.

The connection between corporate social responsibility (CSR) and financial performance is taken under analysis by (Awaysheh et al., 2020), who show that at the managerial level the decision is influenced in favor of improving CSR activities and on the other hand at the investor level the decision will be in favor of performance development, thus there is a clash of interests between

manager and investor. In pragmatic terms, the activity under the impact of CSR represents a maximization of productivity based on the level of satisfaction guaranteed to employees and based on their co-interest in the economic activity in terms of performance, we can appreciate that CSR offers a broad vision with a contribution to sustainability through the productive growth component and the motivational component, these aspects being some of the fundamental elements that ensure the balance between the economic sector and the social sector.

Thus, in another study the authors (Carp et al., 2019) demonstrate that the impact of sustainability on sustainable economic growth implies for the positive causal relationship a correlation of environmental and social measures thus generating socially responsible behavior and sustainable growth of entities. The proposed model based on the linear regression method quantifies the efficiency of the activity and the authors conclude that there is a dependent relationship between it and the optimization of the internal activity as a reaction to the external environment. The stakeholder information approach is also an element that individualizes development strategies. Sustainability reporting on the 3 environments (social, environmental and economic) is an element that will bring benefits to socio-economic development and will generate increased stakeholder confidence (Mihaila et al., 2020; Ramli et al., 2021) in the reported entity.

2. Methodology

In order to deepen the methodological research, a series of procedures and methods belonging to database consolidation techniques were used, descriptive statistical analyses, predictions and regression analyses were performed based on the method of multiple correlations and the method of least squares. Data were retrieved using IBM-SPSS version 25 statistical software. To define the financial performance evaluation model we used the databases published on the official statistical websites (Biroul National de Statistica al Republicii Moldova, 2022; Institutul National de Statistica al Romaniei, 2022) of the two countries, regarding:

- the number of companies existing at the end of each year of the analyzed period (2011-2020) both in the Republic of Moldova and in Romania. The data were analysed on the basis of moving averages.

- total revenues of companies reported in centralized system based on financial statements and presented by official statistical websites (Biroul National de Statistica al Republicii Moldova, 2022; Institutul National de Statistica al Romaniei, 2022) in dynamics for the two countries in the analyzed period. These data were also analysed on the basis of moving averages.

- the number of employed persons in Romania and the Republic of Moldova in thousands, in dynamics during the analyzed period.
- total income achieved in the two national economies assessed on the basis of trends generated by the application of moving average methods.
- the number of persons constituting the active population of the two countries for the period 2011-2020 in thousands.
- the average monthly cost of employees for the two countries during the period analyzed, and these data were also analyzed on the basis of moving averages.

The hypotheses of the study based on the literature are:

H1- under conditions of uncertainty financial performance is influenced by endogenous and exogenous factors. The influence of exogenous factors for economies with adherence to sustainability rules is lower, as they manage to moderate the loss of performance based on high predictability relative to emerging economies without adherence to sustainability rules.

H2- in conditions of uncertainty the impact on emerging economies is amplified by the decrease in the correlation level of aggregate economic indicators and the change in trend curves for the business environment component.

H3- Under conditions of uncertainty, economies adhering to sustainability rules (Romania) achieve faster recovery and rebalancing of entropy than emerging economies (Moldova).

The proposed econometric model is based on the least squares method and multiple linear regression and was developed by the authors using SPSS vs 25 software. The model equation for the two Romania-Moldova cases is:

$$PF = \sum_{i=1}^n \alpha_i * x_i + \epsilon \quad (1)$$

where,

PF- financial performance expressed through the social dimension, respecting the average monthly cost of employees for the two countries.

α_i - regression coefficients of the variables;

x_i - regression variables: active population, Total state companies' revenues of, Number of state companies, Number of employees, Total national income;

ϵ - residual value.

By processing the database we obtained the regression equations for the two economies as follows:

$$\begin{aligned} PF_R &= 0.751 * \text{Number of Romania companies} + 0.892 \\ &\quad * \text{Total Romanian companies' revenues} - 0.044 \\ &\quad * \text{Number of Romania employees} - 0.198 * \text{Total Romania income} + 2.592 \\ &\quad * \text{Romania active population} - 2.950 \end{aligned}$$

where,

PF_R- financial performance expressed through the social dimension, i.e. the average monthly cost of employees for Romania.

For Moldova's economy the model becomes:

$$\begin{aligned} PF_M &= -0.829 * \text{Number of Moldova companies} - 0.107 \\ &\quad * \text{Total Moldova companies' revenues} + 0.395 \\ &\quad * \text{Number of Moldova employees} + 0.097 * \text{Total Moldova income} - 0.178 \\ &\quad * \text{Moldova active population} + 1.765 \end{aligned}$$

where,

PF_M- financial performance expressed through the social dimension, respecting the average monthly cost of employees for Moldova.

Through the regression function coefficients we can see that unlike Romania, in the Republic of Moldova the dynamics of the number of companies shows a trend inversely proportional to the Number of companies indicator, which confirms the volatility of

economic sustainability and lower capacity of the system to support the Moldavian social need. The same observations can be made for the result indicator Total companies' revenues, which in the case of Romania influences the performance by 89% (an increase in financial performance by one unit influences the increase in revenues by 0.89 units). In the case of the Republic of Moldova, the situation is reversed, and the correlation between the two coefficients is reduced to a minimum.

The results of the models reflect in the first stage a significant difference in the distribution of the trend curves and the correlations of the regression indicators with the dependent variable.

3. Results

The regression study carried out on the basis of the parallel databases allowed the identification of distinct characteristics related to the level of correlation of economic and financial indicators at the state level as shown in the table below.

It can be seen from the table that the level of performance of countries governed by sustainability rules is higher, the level of determination coefficient being over 99% while for emerging economies the level of determination is below 50%.

Table 1. Model Summary

Model Summary ^b					Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Ro	0.999 ^a	0.998	0.994	0.0030575	Md	0.649 ^a	0.421	-0.545	0.0238353
Model Summary ^b Change Statistics					Model Summary ^b Change Statistics				
Model	df1	df2	Sig. F Change	Durbin-Watson	Model	df1	df2	Sig. F Change	Durbin-Watson
Ro	5	3	0.000	2.341	Md	5	3	0.805	1.736
a. Predictors: (Constant), Romania active population, Total companies, Number of Romania employees, Total Romania					a. Predictors: (Constant), Moldova active population, Number of Moldova companies, Number of Moldova employees, Total Moldova companies' revenues of, Number of Moldova companies				
b. Dependent Variable: The average monthly cost in Romania					b. Dependent Variable: The average monthly cost in Moldova				

Source: own contribution

These observations allow to validate the hypothesis H2 of the study, under conditions of uncertainty the impact on emerging economies is amplified by the decrease in the level of correlation of aggregate economic indicators and the change in trend curves for the business environment component.

The Anova test allows the rejection of the null hypothesis for the values of the Romanian model, as there are no conditions to validate the probability test in the case of Moldova. For Romania, the value of the Sig significance coefficient is lower than the threshold of 0.05 while for Moldova the null hypothesis cannot be rejected.

Table 2. ANOVA Test

Model RO		Sum of Squares	F	Ssig.
1	Regression	0.013	273.936	0.000 ^b
	Residual	0.000		
	Total	0.013		

a. Dependent Variable: The average monthly cost in Romania
b. Predictors: (Constant), Romania active population, Total Romanian companies' revenues of, Number of Romania companies, Number of Romania employees, Total Romania income

Model MD		Sum of Squares	F	Ssig.
1	Regression	0.001	0.436	0.805 ^b
	Residual	0.002		
	Total	0.003		

a. Dependent Variable: The average monthly cost in Moldova
b. Predictors: (Constant), Moldova active population, Number of Moldova employees, Total Moldova income, Total Moldovan companies' revenues of, Number of Moldova companies

Source: own contribution

It can also be seen from the Anova table that the value of the regression function estimated by the sum of squares regression for Romania is maximized while for Moldova the residual component has a higher weight in the sum of squares.

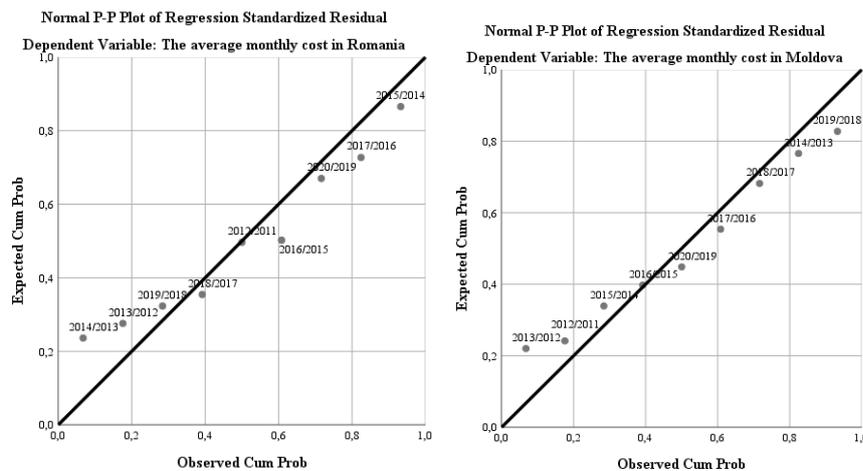


Figure 1. Normal P-P-Plot distribution of the standardized regression of the dependent variable

Source: Authors' calculations using SPSS v25

These observations validate hypothesis H1 under uncertainty economic performance is influenced by endogenous and exogenous factors. The influence of exogenous factors for economies with adherence to sustainability rules is lower, as they manage to moderate the loss of performance based on high predictability relative to emerging economies without adherence to sustainability rules.

By the graphical method we observe that the P-P Plot distributions of the normal probability in relation to the trend line of the dependent variable measuring financial performance are different in the sense of a more homogeneous distribution in relation to the

trend line in the case of the Republic of Moldova, while in the case of Romania we observe a polarization of the errors on the crisis periods, namely the years 2012-2013, 2015-2016 and 2019-2020. This demonstrates H3- under uncertainty economies with adherence to sustainability rules (Romania) achieve faster recovery and entropy rebalancing than emerging economies (Moldova).

4. Discussions

According to (World Population Review, 2022) another ranking based on the Human Development Index HDI in 2022, Romania ranks 54th and Moldova 106th, with Norway, Ireland, Switzerland, Hong Kong (China), Iceland, Germany, Sweden, Australia, Netherlands, Denmark being the top ranked countries. Romania is on a downward trend curve in terms of population, currently accumulating 19 million inhabitants and estimated to reach about 12 million by the end of this century. In terms of population growth rates, Romania has been on a permanent downward trend in population growth rates since the 1980s and since the 1990s these rates have become negative. In Romania, the average age of the population is 41 years, with differences between the average male age of 39.7 years and the average female age of 42.6 years. The population density in the territory is 79.83 persons per km², which is also decreasing.

In terms of economic growth, Romania is significantly affected by the economic recession and the effects of the pandemic, which together with the current energy crisis are indicators of structural deficiencies of the Romanian economy. Thus, the Romanian industry, strongly energy-intensive in the context of the current energy crisis, is facing major problems in managing production costs, thus contributing to increasing unemployment (another indicator of vulnerability). Also, from an economic point of view, the ageing railway infrastructure and the logistical problems in shipping contribute to the vulnerable overall picture of the country's economic status. Romania has a competitive advantage over Moldova as a member of the European Union and party to the CETA agreement.

And for the Republic of Moldova, specialists (World Population Review, 2022) estimate a demographic downward trend from 4 million inhabitants today to about 2 million at the end of this century. The inflection point of population growth was the beginning of 1995 when Moldova went into negative population growth, a trend that continues today. The average age in the Republic of Moldova is 36.7 years, there are significant differences according to sex so the average age of the male population is 34.9 years and the female population is 38.6 years. The population density is higher than Romania's 118.57 inhabitants per km². The economic structure of activity in Moldova is predominantly agricultural, with significant representation for services and trade. Agriculture accounts for about 40% of GDP, and it is also the main supplier of unprocessed exports. The main weakness stems from energy dependency and the import of raw materials from Russia, but in recent years there has been an improvement in this status.

The analysis by pairs of data shows that in terms of the number of companies, there is an agreement in the sample between their dynamics throughout the period analyzed, finding an equivalent distribution of dynamics on both the Romanian and Moldovan cases. The standard deviation is 0.04 and the values allow the assimilation of a balance attributed to

exogenous factors, i.e. the integration in the European context influenced by the rapid development trend in the analyzed period. As far as the companies' revenues are concerned, there is an increase in the level of the standard deviation on pairs of data, which means that there are significant differences between the Romanian and the Moldovan economic context in terms of economic capital and its fruition through economic entities.

We observe the same trend for the number of employees attracted to the Romanian and Moldovan system, in which case the flattening of the differences is greater due to endogenous components of social protection, the standard deviation being 0.05. All these aspects are presented in Table 3.

Table 3. Data pair analysis

		Paired Differences			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference
		Lower			
Pair 1	Number of Romania companies - Number of Moldova companies	0.0016858	0.0404445	0.0134815	-0.0294026
Pair 2	Total Romanian companies' revenues - Total Moldovan companies' revenues	-0.0392221	0.1311696	0.0437232	-0.1400480
Pair 3	Number of Romania employees - Number of Moldova employees	-0.0096140	0.0497481	0.0165827	-0.0478538
Pair 4	Total Romania income - Total Moldova income	0.0665052	0.1625848	0.0541949	-0.0584685
Pair 5	Romania active population - Moldova active population	-0.0427235	0.0331031	0.0110344	-0.0681688

Source: Authors' calculations using SPSS v25

From table 3 we notice that for the pair number 1 Number of Romania companies - Number of Moldova companies, the level of positive correlation is below 1%, and for the pair 4 Total Romania income - Total Moldova income the level of positive correlation is below 6%. The other correlations are negative. This level of correlation corroborated with the trend dynamics of the indicators in the two states shows the differences in development and allocative efficiency to the detriment of the Republic of Moldova.

The analysis allows highlighting the social welfare through the first financial performance, welfare that is affected by both exogenous and endogenous factors, generating an increasing trend based on exogenous factors in the context of globalisation, sensitive to uncertainty and vulnerable to internal economic conditions.

Conclusions

The authors have achieved the objectives of the study by conducting a literature review, framing the phenomenon of social welfare in an external and domestic context and making a parallel assessment between the two countries with developing economies and

emerging economies. The proposed model showed that the impact of EU accession changes the welfare equation in a positive direction, which is balanced by the influence of exogenous factors, sustainable European policy, while for emerging countries the lack of these rules, the level of correlation of economic indicators is lower contributing to the instability of the social security and welfare function.

The study is useful for economic policy makers who can adjust some strategic elements in order to improve the level of social welfare with medium and long term effect.

The limitations of the study are the relatively small number of indicators analysed and the limited study period, which the authors intend to extend in order to improve the research results in the near future.

References

- Abdel-Basset, M., Ding, W., Mohamed, R., & Metawa, N. (2020). An integrated plithogenic MCDM approach for financial performance evaluation of manufacturing industries. *Risk Management*, 22(3), 192–218. <https://doi.org/10.1057/s41283-020-00061-4>
- Achim, M. V., Safta, I. L., Văidean, V. L., Mureșan, G. M., & Borlea, N. S. (2021). The impact of covid-19 on financial management: evidence from Romania. *Economic Research-Ekonomska Istrazivanja*, 0(0), 1–22. <https://doi.org/10.1080/1331677X.2021.1922090>
- Asongu, S. A., Uduji, J. I., & Okolo-Obasi, E. N. (2019). Transfer pricing and corporate social responsibility: arguments, views and agenda. *Mineral Economics*, 32(3), 353–363. <https://doi.org/10.1007/s13563-019-00195-2>
- Awaysheh, A., Heron, R. A., Perry, T., & Wilson, J. I. (2020). On the relation between corporate social responsibility and financial performance. *Strategic Management Journal*, 41(6), 965–987. <https://doi.org/https://doi.org/10.1002/smj.3122>
- Bakker, H., Dunke, F., & Nickel, S. (2020). A structuring review on multi-stage optimization under uncertainty: Aligning concepts from theory and practice. *Omega (United Kingdom)*, 96(xxxx), 102080. <https://doi.org/10.1016/j.omega.2019.06.006>
- Ban, A., Ban, O., Bogdan, V., Claudia Diana, S.-P., & Tuse, D. (2020). Performance evaluation model of Romanian manufacturing listed companies by fuzzy AHP and TOPSIS. *Technological and Economic Development of Economy*, 26, 1–29. <https://doi.org/10.3846/tede.2020.12367>
- Biroul National de Statistica al Republicii Moldova. (2022). *Statistica Sociala*. Banca de Date Statistice.
- Buzgurescu, O. L. P., & Elena, N. (2020). *Bankruptcy Risk Prediction in Assuring the Financial Performance of Romanian Industrial Companies*. 104, 19–28. <https://doi.org/10.1108/s1569-375920200000104003>
- Carp, M., Păvăloaia, L., Afrăsinei, M.-B., & Georgescu, I. E. (2019). Is Sustainability Reporting a Business Strategy for Firm's Growth? Empirical Study on the Romanian Capital Market. In *Sustainability* (Vol. 11, Issue 3). <https://doi.org/10.3390/su11030658>
- Chășovschi, C. E., Nastase, C., Popescu, M., Scutariu, A.-L., & Condratov, I.-A. (2021). Human Resources Training Needs in the Small and Medium Enterprises from Cross-Border Area Romania-Ukraine-Republic of Moldova. In *Sustainability* (Vol. 13, Issue 4). <https://doi.org/10.3390/su13042150>
- Davidescu, A. A., Apostu, S.-A., & Paul, A. (2021). Comparative Analysis of Different

- Univariate Forecasting Methods in Modelling and Predicting the Romanian Unemployment Rate for the Period 2021–2022. In *Entropy* (Vol. 23, Issue 3). <https://doi.org/10.3390/e23030325>
- Davidescu, A. A., Apostu, S.-A., Paul, A., & Casuneanu, I. (2020). Work Flexibility, Job Satisfaction, and Job Performance among Romanian Employees—Implications for Sustainable Human Resource Management. In *Sustainability* (Vol. 12, Issue 15). <https://doi.org/10.3390/su12156086>
- Dobson, P. W., & Waterson, M. (2003). Countervailing Power and Consumer Prices. *The Economic Journal*, 107(441), 418–430. <https://doi.org/10.1111/j.0013-0133.1997.167.x>
- Dragomirescu-Gaina, C., Philippas, D., & Tsionas, M. G. (2021). Trading off accuracy for speed: Hedge funds' decision-making under uncertainty. *International Review of Financial Analysis*, 75(December 2020), 101728. <https://doi.org/10.1016/j.irfa.2021.101728>
- European Platform for Rehabilitation. (2022). *European pillar of social rights*. European Platform for Rehabilitation. <https://www.epr.eu/what-we-do/policy-analysis/european-pillar-of-social-rights/>
- Hunjra, A. I., Verhoeven, P., & Zureigat, Q. (2020). Capital Structure as a Mediating Factor in the Relationship between Uncertainty, CSR, Stakeholder Interest and Financial Performance. *Journal of Risk and Financial Management*, 13(6), 117. <https://doi.org/10.3390/jrfm13060117>
- Institutul National de Statistica al Romaniei. (2022). *Statistica sociala*. Tempo Online.
- Li, K., Kim, D. J., Lang, K. R., Kauffman, R. J., & Naldi, M. (2020). How should we understand the digital economy in Asia? Critical assessment and research agenda. *Electronic Commerce Research and Applications*, 44, 101004. <https://doi.org/https://doi.org/10.1016/j.elerap.2020.101004>
- Mihaila, S., Tanasa (Brînzaru), S.-M., Grosu, V., & Timofte (Coca), C. (2020). Integrated Reporting -- An Influencing Factor on the Solvency and Liquidity of a Company and Its Role in the Managerial Decision-Making Process. In J. Xu, G. Duca, S. E. Ahmed, F. P. García Márquez, & A. Hajiyev (Eds.), *Proceedings of the Fourteenth International Conference on Management Science and Engineering Management* (pp. 783–794). Springer International Publishing.
- Oncioiu, I., Petrescu, A. G., Bîlcan, F. R., Petrescu, M., Popescu, D. M., & Anghel, E. (2020). Corporate sustainability reporting and financial performance. *Sustainability (Switzerland)*, 12(10), 1–13. <https://doi.org/10.3390/su12104297>
- Popescu, C. R. G., & Popescu, G. N. (2019). An Exploratory Study Based on a Questionnaire Concerning Green and Sustainable Finance, Corporate Social Responsibility, and Performance: Evidence from the Romanian Business Environment. In *Journal of Risk and Financial Management* (Vol. 12, Issue 4). <https://doi.org/10.3390/jrfm12040162>
- Ramli, N. M., Rahman, A. R. A., Marzuki, A., Marzuki, M. M., & Muda, W. A. W. A. W. (2021). Implementation of IFRS 13 Fair Value Measurement: Issues and Challenges faced by the Islamic Financial Institutions in Malaysia. *Jurnal Pengurusan*, 63. <https://doi.org/10.17576/pengurusan-2021-63-04>
- Sabău Popa, C. D., Popa, D. N., Bogdan, V., & Simut, R. (2021). Composite financial performance index prediction – a neural networks approach. *Journal of Business Economics and Management*, 22(2), 277–296. <https://doi.org/10.3846/jbem.2021.14000>
- Singh, N. P. (2020). Managing environmental uncertainty for improved firm financial performance: the moderating role of supply chain risk management practices on

- managerial decision making. *International Journal of Logistics Research and Applications*, 23(3), 270–290. <https://doi.org/10.1080/13675567.2019.1684462>
- Socoliuc, Cosmulese, C., Ciubotariu, M., Mihaila, Arion, & Grosu. (2020). Sustainability Reporting as a Mixture of CSR and Sustainable Development. A Model for Micro-Enterprises within the Romanian Forestry Sector. *Sustainability*, 12, 603. <https://doi.org/10.3390/su12020603>
- The Social Progress Imperative. (2021). *Social progress index*. Socialprogress.Org.
- Tseng, M. L., Bui, T. D., Lim, M. K., & Lewi, S. (2021). A cause and effect model for digital sustainable supply chain competitiveness under uncertainties: Enhancing digital platform. *Sustainability (Switzerland)*, 13(18). <https://doi.org/10.3390/su131810150>
- World Population Review. (2022). *Human Development Index (HDI) by Country 2022*. Human Development Index (HDI).
- Zhou, X., Xu, Z., Chai, J., Yao, L., Wang, S., & Lev, B. (2019). Efficiency evaluation for banking systems under uncertainty: A multi-period three-stage DEA model. *Omega (United Kingdom)*, 85, 68–82. <https://doi.org/10.1016/j.omega.2018.05.012>