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ANALYSIS OF THE PERFORMANCE OF SOME ECONOMIES ACCORDING TO THE SIZE CLASS OF THE ENTERPRISES

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Abstract: The need to develop the economy through the contribution of enterprises to the achievement of national well-being is a concern of every country. As part of this study, an analysis of some statistical business indicators, existing in the Eurostat database, was carried out, which allows establishing the evolution according to the size of the enterprises in the non-financial sector (Industry, trade, and services). The analysis used six indicators for eight Eastern European countries, in the period 2018-2020, to signal improvements or deterioration of the situation in the economy. The study used two working hypotheses that were verified and subsequently the countries were classified into three areas of economic potential (progress): high, medium, and low. The classification of countries in these areas of progress was achieved using a synthetic result indicator called "Share of the average productivity of each employee in generating added value", which allowed the classification of countries according to the performance obtained because of the effective combination of production factors (human, material and financial).

Key words: *performance, economic potential, economic development.*

1. INTRODUCTION

Globalization and digitization have greatly improved knowledge worldwide, and the impact on business has been felt through industrial and economic development. Enterprises become an engine of economic growth and development [1,2], being flexible and capable of adjustment [3,4], able to generate innovations [5,6].

In the highly competitive global economy, small and medium-sized enterprises (SMEs) occupy a large proportion among enterprises and are considered engines of economic development in many countries [7,8]. Coming to support the entrepreneurial spirit and create conditions for the development of innovative concepts, the European Commission (EC) through its institutions introduced a legal framework to support the activity of SMEs. Thus, through the 2008 strategy, it created a legal framework through which it introduced the principle "Think small first" to encourage countries to take over and adopt policies and measures that provide support to SMEs [9] . In 2010, the European Parliament adopted a series of regulations for: stimulating innovation at the community level [10], industrial globalization policies [11], measures to increase competitiveness in business [12], reindustrialization of the economy [12] 13], and offered solutions for the development of information and communication technology (ICT) to help SMEs. Later, to counteract the effects of pollution and those of inequality of opportunities, he created support policies that would lead countries towards the development of sustainable economies and towards alternative policies for solving social problems [14], towards easy access to financing [15] and at the same time to allow the stimulation of research and development [16,17]. Thus, through the European policies that were introduced at the national level and through the funding programs for start-ups (also considered business incubators), SMEs were encouraged and stimulated to develop, and thus be able to support the economy and local, regional and national activities within communities. This is how innovative start-ups appeared, which play an important role in innovation processes [18]. These took the form of SMEs, whose main characteristic is the ability to quickly develop and test prototypes, services and business concepts [19], but which also have some limits related to

legal liability (limited to the level of capital employed) [20] and the possibility of financing [21]. However, according to Witjes et al. [22] and Viesi et al. [23], SMEs comprise at least 95% of private sector companies that employ a large part of the workforce and thus contribute to micro-level development and macro of the economies of which they are a part.

Other studies such as Singh et al. [24] and Ashton et al. [25], show us that large companies have better economic results because of easier access to resources (financial, technical, and human) and financing. These, using resources and capabilities that SMEs lack, can reduce the problems they face and the associated risk [21,26]. Global competitiveness is achieved by large companies directly through innovation, which brings revenue and/or cost savings, and indirectly through greater growth potential, easy access to new markets and opportunities [27,28,29]. Large companies, in addition to the need to be competitive, face the need to develop sustainable development practices [30,31,32]. They can create collaborations with start-ups to accelerate innovations [33] or they can use financing programs to accelerate innovation and thus businesses turn from small-scale incubators into solutions on an international scale [34,35]. The interaction between cooperation and competition (called coopetition), in which there are collaborations between rival firms for mutually beneficial results, can be found in the economy [36, 37], where they can develop various collaboration links (horizontal or vertical) [38,39, 40]. However, the cooperation-performance link at the firm level has been explored highlighting some "dark sides" of coopetition, such as the tensions (conflict) that can arise if firms share assets with rival businesses [41]. Whatever the way of developing a business, companies need to transform their business models by developing procedures that enable a high level of productivity and that are consistent with environmentally sustainable and economically efficient activities [42]. In this situation, it was found that productivity is sometimes slowed down by generating a higher cost in the short and medium term [43].

The novelty of this study is found in the analysis of the evolution of the countries' economy from the perspective of the companies that released results at the macroeconomic level. The research was conducted on eight Eastern European countries that had different economic developments, although they started from the same model of socio-economic and political governance. The hypotheses formulated in this study are: (H1) Do the companies in the studied countries show significant changes in the period 2018-2019 compared to 2020? and (H2) Does the overall contribution of companies to the economy differ across countries in terms of efficiency?

The purpose of this study is to verify the proposed hypotheses. Thus, the hypothesis (H1) is tested through comparative analyses between countries at the individual level (for each indicator and for each company size class) that allow identifying the evolution of these countries. The hypothesis (H2) is verified by creating a diagram in which all the indicators from the year 2020 are included using an ordinal scale of importance and then classifying the countries according to the progress made in one of the three areas of performance: high, medium, or low.

2. MATERIAL AND METHOD

The study allowed the analysis of some economic indicators that measure the non-financial sector (Industry, trade and services) existing in the Eurostat database, for the years 2018-2020 [43]. To carry out the study, information was used for 8 countries in Eastern Europe: Bulgaria (BG), Czech Republic (CZ), Estonia (EE), Lithuania (LT), Hungary (HU), Poland (PL), Romania (RO) and Slovakia (SK), information found in the Eurostat Methodology [45] which uses surveys to obtain data [46]. These countries were chosen because they are countries where the data can be compared both because of positioning in a close geographical area and because of the political past, namely the transition of the economies from the centralized state economy to the private market economy. To carry out this study, data were taken from the Eurostat database, which allowed the selection of companies according to the size class of the workforce [47], and the indicators used are Number of enterprises (NE), Persons employed in enterprises (PE), Turnover (T), Added value (AV), according to Table 1.

Table 1

The situation of the initial indicators, adapted from Eurostat database [20]

No.	Abv.	Unit	Indicator explanations
1	NE	enterprises - number	the number of active enterprises
2	EP	employees' number	the total number of employed persons
3	T	mil. euro	the total of all sales (excluding VAT) of goods and services
4	AV	mil. euro	the difference between the value of what is produced and the intermediate consumption that goes into production, less production subsidies and costs, taxes, and duties
NE - Number of enterprises; EP - employed persons in the enterprises; T – Turnover; AV - Added value.			

Table 2

The size enterprise list

Label	Number of employees	Explanations of size enterprises
s1	>250	enterprises with > 250 employees
s2	50÷249	enterprises with 50-249 employees
s3	20÷49	enterprises with 20-49 employees
s4	10÷19	enterprises with 10-19 employees
s5	0÷9	enterprises withs 0-9 employees
s - size class of the enterprise.		

For the analysis of the indicators mentioned in Table 1, we have in Table 2 the method of presentation of each size class of enterprises (according to the Eurostat database) which was then indexed for ease of presentation.

Later, the data were expressed in percentages to be able to compare the information related to each country by means of each indicator.

The indicator 'number of enterprises' was expressed in percentages, identifying the relevant correspondent for each country, due to the share of total enterprises per size class, according to Eq (1).

$$SNE_{s,c,y} = \frac{NE_{s,c,y}}{\sum_{s=1}^{5} NE_{s,y}} \quad (1)$$

where $SNE_{s,c,y}$ - Share of number of enterprises from each country by size class and year in the total number of enterprises in the same size class and in the same year, $NE_{s,c,y}$ - is the number of enterprises associated with each size class of enterprises in the same country and in the same year, $\Sigma NE_{s,y}$ - is the total number of enterprises associated with each size class of enterprises in the same year, s – index of size enterprises, s = 1÷5, (see Table 2), c – index of country, c = 1÷8 (1 – BG to 8 – SK), y – year, y = 2018 ÷ 2020.

The indicator "employed persons", expressed in percentages, resulting in the share of employees in each country and enterprise category in the related total, resulting in the human resource that produced value, according to Eq (2).

$$SEP_{s,c,y} = \frac{EP_{s,c,y}}{\sum_{s=1}^{5} EP_{s,y}} \quad (2)$$

where $SEP_{s,c,y}$ - Share of employed persons from each country by size class and year in the total employed persons in the same size class and in the same year, $EP_{s,c,y}$ - is the employed persons associated with each size class of enterprises in the same country and in the same year, $\Sigma EP_{s,y}$ - is the total employed persons associated with each size class of enterprises in the same year.

The 'turnover' indicator was expressed in percentages, obtaining the share of turnover for each country and category of enterprises in the related total, the potential at the country level, according to Eq (3).

$$ST_{s,c,y} = \frac{T_{s,c,y}}{\sum_{s=1}^{5} T_{s,y}} \quad (3)$$

where $ST_{s,c,y}$ - Share of turnover from each country by size class and year in the total turnover in the same size class and in the same year, $T_{s,c,y}$ - is the turnover associated with each size class of enterprises in the same country and in the same year, $\Sigma T_{s,y}$ - is the total turnover associated with each size class of enterprises in the same year.

The 'added value' indicator, expressed in percentages, results in the share of value added for each country and enterprise category in the related total, the result at country level, according to Eq (4).

$$SAV_{s,c,y} = \frac{AV_{s,c,y}}{\sum_{s=1}^{5} AV_{s,y}} \quad (4)$$

where $SAV_{s,c,y}$ - Share of added value from each country by size class and year in the total turnover in the same size class and in the same year, $\Sigma AV_{s,y}$ - is the total value added associated with each size class of enterprises in the same year.

The 'Turnover per employee' indicator is an efficiency indicator that expresses the average turnover productivity at the level of one employee, according to Eq (5).

$$TEP_{s,c,y} = \frac{T_{s,c,y}}{EP_{s,c,y}} \quad (5)$$

where $TEP_{s,c,y}$ - The average productivity of each employee in generating turnover associated with each size class of enterprises in the same country and in the same year.

The indicator 'Share of average productivity of each employee in the generation of turnover' was calculated using the indicator 'Turnover per employee' from each total turnover per employee, resulting in the share of the average productivity of each country in the total value of the countries studied, according to Eq. (6).

$$STEP_{s,c,y} = \frac{TEP_{s,c,y}}{\sum_{s=1}^{5} TEP_{s,y}} \quad (6)$$

where $STEP_{s,c,y}$ – Share of the average productivity of each employee in generating turnover associated with each size class of enterprises in the same country and in the same year.

The "Average productivity of each employee in the generation of added value" indicator was calculated by reporting the values related to the "Added value" indicators to "Persons employed in enterprises" for each country and year, according to Eq. (7).

$$AVEP_{s,c,y} = \frac{AV_{s,c,y}}{EP_{s,c,y}} \quad (7)$$

where $AVEP_{s,c,y}$ - The average productivity of each employee in generating added value associated with each size class of enterprises in the same country and in the same year.

The "Share of the average productivity of each employee, in the generation of added value" indicator was calculated using the "Value added per employee" indicator from each country for the total sum of the added value per employee from all countries (Eq. 8).

$$SAVEP_{s,c,y} = \frac{AVEP_{s,c,y}}{\sum_{s=1}^{5} AVEP_{s,y}} \quad (8)$$

where $SAVEP_{s,c,y}$ – Share of the average productivity of each employee in generating added value associated with each size class of enterprises in the same country and in the same year.

Following the mathematical calculations (Eq. (1) ÷ (8)), the indicators presented in Table 3 were obtained.

The indicators presented in Table 3 allowed the performance of individual analyzes at the level of each indicator and comparisons between the values obtained between countries during the three years of study.

Later, a diagram was made at the level of 2020, in which the results of all indicators were included using an ordinal quantitative scale of importance, for measuring and ordering the countries according to the values obtained within each indicator. Depending on the value obtained, a score was given on a scale from 1-8, thus, for the highest value obtained at the level of the indicator, also considered the best result, a score of "1" was given and for the lowest, resulting the value "8" (or the last digit recorded if there were countries with equal values within the same indicator).

This evaluation of the countries, on each indicator, led us to a comparative analysis of the countries according to the size class of the enterprises without giving us the possibility to classify the countries at the global level due to the specificity of each indicator.

Table 3

The situation of the analysed indicators

No.	Abv.	Unit	Indicator explanations
1	SNE	%	'The share of number of enterprises per country in total number of enterprises' allows the analysis of countries from the perspective of the number of owned enterprises that produce effects in the economy because of the economic activities carried out.
2	SEP	%	'Share of employed persons' from the perspective of each country by size class and year in the total number of persons employed in the same size class and in the same year
3	ST	%	'Share of turnover' allows the analysis of countries from the perspective of the turnover achieved at the country level in the total turnover of the countries studied.
4	SAV	%	'The share of added value at the cost of factors' allows the analysis of countries from the perspective of added value, showing what remains at the end and contributes to the development of the economy.
5	STEP	%	Share of the average productivity of each employee in generating turnover' - efficiency indicator showing production expressed in monetary units related on average, per employee.
6	SAVEP	%	Share of the average productivity of each employee in generating added value' - efficiency indicator that shows us the added value produced and remaining after deducting consumption, reported on average per employee.

The ranking according to the economic potential was made using only the values obtained from the last indicator (SAVEP _ see Table 9), because it best expresses, at the country level, the share of the average productivity of each employee in the generation of added value, respectively the contribution of enterprises to economic development. The SAVEP indicator was chosen as a reference in the selection of countries, because it was considered to be the most synthetic result indicator that expresses the value volume of what was actually produced in the economy, on average, by one employee, expressing at the same time the possibility of self-financing of the agents' activity economic, the degree of economic integration of the enterprises and the contribution of the enterprises to the increase of the gross domestic product.

The ranking of the studied countries was made possible by classifying the countries in 3 performance zones: high, medium, and low, and it shows us the contribution of enterprises according to their size to the economic development of the respective country.

3. RESULTS AND DISCUSSION

Table 4 shows the evolution of the countries during the years 2018-2020 according to the number of enterprises grouped by size class according to the number of employees.

Table 4

The share of the number of enterprises in the total number of enterprises (SNE)

No.	Size	BG	CZ	EE	LT	HU	PL	RO	SK
s1	2018	0.07	0.18	0.02	0.04	0.10	0.36	0.18	0.06
	2019	0.07	0.18	0.02	0.04	0.10	0.35	0.18	0.06
	2020	0.07	0.18	0.02	0.04	0.10	0.36	0.17	0.06
s2	2018	0.10	0.16	0.02	0.05	0.10	0.34	0.18	0.06
	2019	0.10	0.16	0.02	0.05	0.10	0.34	0.17	0.06
	2020	0.10	0.16	0.02	0.05	0.10	0.34	0.17	0.06
s3	2018	0.10	0.14	0.02	0.05	0.11	0.35	0.18	0.05
	2019	0.10	0.14	0.02	0.05	0.11	0.35	0.18	0.05
	2020	0.10	0.15	0.02	0.05	0.10	0.36	0.18	0.05
s4	2018	0.10	0.13	0.02	0.05	0.12	0.35	0.18	0.05
	2019	0.10	0.13	0.02	0.05	0.12	0.36	0.18	0.05
	2020	0.09	0.13	0.02	0.05	0.12	0.36	0.18	0.04
s5	2018	0.06	0.20	0.01	0.04	0.11	0.38	0.09	0.10
	2019	0.06	0.20	0.01	0.04	0.12	0.38	0.09	0.10
	2020	0.06	0.20	0.02	0.04	0.12	0.38	0.09	0.10

From the analysis of Table 4, PL is the country with the most enterprises in all size categories, followed by CZ and RO. From the analysis of Table 1 (s1), in all 8 countries in the 3 years under study, there were no changes in the share of the number of companies in the total number of companies with several employees (>250). The only exception being in 2019 when PL recorded a decrease of 1% and in 2020 RO recorded a decrease of 1%.

From the analysis of Table 4 (s2), at the level of the weight of the number of companies in total companies with employees between 50 and 249, no significant changes were registered in the 3 years studied. The exception is RO, where the number of enterprises decreased by 1% in 2019 and that decrease was maintained in 2020.

In Table 4 (s3), at the level of the share of the number of enterprises in total enterprises with employees between 20 and 49, the maintenance of the shares over the 3 years can be seen in most countries. An exception is registered in 2020 in CZ and PL where it increased by 1% and in HU where it decreased by 1%.

In Table 4 (s4), at the level of the weight of the number of enterprises in total enterprises with employees between 10 and 19, an increase of 1% in PL is found in 2019, and it will remain at the same level in 2020. A decrease of 1% is recorded in BG and SK, in 2020.

In Table 4 (s5) at the level of the share of the number of companies in total companies with employees between 0 and 9, we have the maintenance of the shares in the 3 years studied, the only exception being EE where in 2020 it increased by 1%.

Table 5 shows the share of people employed in enterprises in the economy of each country according to the size class of the workforce. From the analysis of Table 5, there are no significant changes at the country level over the years studied in relation to the share of the number of employees in companies.

To observe the size level of the turnover of each country, the indicator "The share of the turnover of the companies from each country in the total turnover of the countries under study" was calculated, which is presented in Table 6.

Table 5

The share of the persons employed by size class of employment (SEP)

No.	Size	BG	CZ	EE	LT	HU	PL	RO	SK
s1	2018	0.06	0.15	0.01	0.03	0.11	0.39	0.18	0.06
	2019	0.06	0.15	0.01	0.03	0.11	0.41	0.17	0.05
	2020	0.06	0.15	0.01	0.03	0.11	0.41	0.17	0.05
s2	2018	0.09	0.16	0.02	0.05	0.10	0.35	0.18	0.06
	2019	0.10	0.16	0.02	0.05	0.10	0.34	0.18	0.06
	2020	0.09	0.16	0.02	0.05	0.10	0.35	0.17	0.06
s3	2018	0.10	0.14	0.02	0.05	0.11	0.34	0.19	0.05
	2019	0.10	0.14	0.02	0.05	0.11	0.34	0.19	0.05
	2020	0.10	0.15	0.02	0.05	0.10	0.35	0.18	0.05
s4	2018	0.09	0.13	0.02	0.05	0.12	0.36	0.18	0.05
	2019	0.09	0.13	0.02	0.05	0.12	0.37	0.18	0.04
	2020	0.09	0.13	0.02	0.05	0.12	0.37	0.18	0.04
s5	2018	0.07	0.14	0.02	0.04	0.12	0.41	0.12	0.09
	2019	0.07	0.14	0.02	0.04	0.12	0.41	0.12	0.09
	2020	0.07	0.14	0.02	0.04	0.12	0.41	0.12	0.08

Table 6

The share of the turnover (ST)

No.	Size	BG	CZ	EE	LT	HU	PL	RO	SK
s1	2018	0.04	0.20	0.01	0.03	0.12	0.41	0.12	0.08
	2019	0.04	0.20	0.01	0.03	0.12	0.42	0.11	0.07
	2020	0.04	0.19	0.01	0.03	0.12	0.43	0.12	0.07
s2	2018	0.06	0.21	0.03	0.04	0.12	0.36	0.12	0.07
	2019	0.07	0.20	0.03	0.04	0.12	0.35	0.12	0.07
	2020	0.07	0.20	0.03	0.04	0.11	0.36	0.13	0.07
s3	2018	0.06	0.19	0.03	0.04	0.11	0.37	0.12	0.08
	2019	0.06	0.20	0.03	0.04	0.11	0.35	0.13	0.07
	2020	0.07	0.19	0.03	0.05	0.11	0.36	0.13	0.07
s4	2018	0.06	0.16	0.03	0.04	0.13	0.39	0.13	0.06
	2019	0.06	0.16	0.04	0.05	0.12	0.39	0.12	0.06
	2020	0.07	0.16	0.03	0.05	0.13	0.38	0.12	0.06
s5	2018	0.06	0.16	0.04	0.03	0.11	0.43	0.09	0.08
	2019	0.06	0.16	0.04	0.03	0.11	0.42	0.09	0.08
	2020	0.06	0.15	0.03	0.03	0.11	0.44	0.10	0.08

Analyzing Table 6, we find that the highest values of turnover are recorded in countries such as: PL, followed at a large distance (approximately 20%) by CZ, RO, and HU.

From the analysis of Table 6 (s1), for the indicator "The share of the turnover" of the non-financial business economy in the country in the total turnover for companies with several employees >250, the percentages remain constant in most countries. An exception is registered in CZ in 2020 when it decreases by 1%, in PL in 2019 and 2020 when it increases every year by 1%, in RO when in 2019 it decreases by 1% and in 2020 it returns to the percentage from 2019 and in SK when in 2019 it drops by 1% and remains at this percentage in 2020.

Analyzing Table 6 (s2), we notice that for the indicator "The share of turnover" with employees between 50 and 249, the values remain constant in most countries. In BG there is an increase of 1% in 2019, after which it remains at the same percentage in 2020. In CZ we have a decrease of 1% in 2019 and then its maintenance in 2020. In HU a decrease of 1% in 2020. In PL there is a decrease of 1% in 2019 and the return in 2020 to the percentage of 2019. In RO there is an increase of 1% in 2020.

From the analysis of Table 6 (s3), it can be seen that the indicator "The share of the turnover" for companies with a number of employees between 20 and 49 shows several changes: BG increases by 1% in 2020, CZ increases by 1% in 2019 and decreases by 1% in 2020, LT increases by 1% in 2020, PL decreases by 2% in 2019 and increases by 1% in 2020, RO increases by 1% in 2019 and maintains this percentage in 2020, and SK decreases by 1% in 2019 and remains at the same percentage in 2020.

In Table 6 (s4) at the indicator "The share of the turnover" with a number of employees between 10 and 19, it is noted that changes exist only in the following countries: BG where in 2020 an increase of 1% is registered, EE where in 2019 there is an increase of 1% after which in 2020 it decreases by 1%, LT where in 2019 it increases by 1% and the same percentage is maintained in 2020 , HU where in 2019 it decreases by 1% and then in 2020 it increases by 1%, PL where in 2020 it decreases by 1% and RO where in 2019 it decreases same by one percent.

In Table 6 (s5) at the indicator "The share of the turnover" for companies between 0 and 9 number of employees, changes are noted in the following countries: CZ decreases by 1% in 2020, EE decreases by 1% in 2020, PL decreases by 1% in 2019 and increases by 2% in 2020 and RO increases by 1% in 2020.

Thus, we observe that in PL the enterprises with 0-9 employees (Table 6 – s5) are the most many (37.55%) producing the highest turnover (44.05%), according to Table 6 – s5. Following Table 6 (s4) with 10-19 employees, we observe

that in PL the enterprises have the largest percentage (35.83%) and produce a turnover of 38.49%, according to Table 6 (s4). The enterprises from PL with over 250 employees (35.67%) in Table 2 (s1) which produce a turnover of 42.60% (Table 6 (s1). Those in Table 6 (s3) with employees between 20-49 employees (35.5%) who produce a turnover of 36.36%. Thus, PL is the country with the most companies in all size categories studied.

Table 7 shows the evolution of the added value in the 8 countries studied, for companies grouped by size class.

The highest value for the indicator "The share of Added Value" is held by PL, followed by CZ, RO, and HU. A it is seen (s1) "The share of Added Value " for enterprises with several employees (>250), there are insignificant changes within each country from one year to the next.

Thus, in CZ in 2020 there is a decrease of 1% compared to the previous year, in HU there is an increase of 1% in 2019 and the percentage remains unchanged in 2020, in PL there is an increase of 1% in 2019 and with another 1% in 2020, and the rest of the countries being unchanged.

In Table 7 (s2), for companies with employees between 50-249, the following changes can be found: in CZ in 2020 there is a decrease of 1%, in LT an increase of 1% in 2019, in HU a decrease of 1% in 2020 and in PL an increase of 1% 2020. Analyzing Table 7 (s3), for companies with employees between 20-49, we find that there are changes in: HU in 2020, with a decrease of 1%, in PL in 2019 with a decrease of 1% and then in 2020 an increase of 1%, in RO an increase of 1% in 2019.

In Table 7 (s4) for companies with employees between 10-19, we observe changes in the following countries: LT increases by 1% in 2020, HU decreases by 1% in 2019, PL increases by 2% in 2019 and with 1% in 2020, RO decreases by 1% in 2020. For companies with employees in between 0-9, we observe changes in the following countries: BG increases by 1% in 2020, CZ decreases by 2% in 2019, LT decreases by 1% in 2019 and then increases by 1% in 2020, HU decreases by 2% in 2020, PL increases by 1% in 2019, RO increases by 1% in 2019.

To be able to have an analysis of the effect obtained versus the effort made, the indicator of turnover per employee at the level of the situation in each country was calculated and the results presented in Table 8 were obtained. At the level of the first category of companies (Table 8 – s1), with employees over 250, it is found that the indicator of turnover per employee has an improvement of 1% in 2019 in HU and RO which is maintained and in 2020.

Table 7

The share of the added value (SAV)

No.	Size	BG	CZ	EE	LT	HU	PL	RO	SK
s1	2018	0.04	0.18	0.01	0.03	0.12	0.44	0.12	0.06
	2019	0.04	0.18	0.01	0.03	0.11	0.45	0.12	0.06
	2020	0.04	0.17	0.01	0.03	0.11	0.46	0.12	0.06
s2	2018	0.06	0.20	0.03	0.04	0.11	0.38	0.12	0.06
	2019	0.06	0.20	0.03	0.05	0.11	0.38	0.12	0.06
	2020	0.06	0.19	0.03	0.05	0.10	0.39	0.12	0.06
s3	2018	0.06	0.17	0.03	0.05	0.11	0.39	0.13	0.06
	2019	0.06	0.17	0.03	0.05	0.11	0.38	0.14	0.06
	2020	0.06	0.17	0.03	0.05	0.10	0.39	0.14	0.06
s4	2018	0.05	0.16	0.03	0.04	0.13	0.39	0.14	0.05
	2019	0.06	0.15	0.03	0.04	0.12	0.41	0.14	0.05
	2020	0.06	0.15	0.03	0.05	0.12	0.42	0.13	0.05
s5	2018	0.05	0.20	0.03	0.04	0.13	0.36	0.12	0.08
	2019	0.05	0.18	0.03	0.03	0.13	0.37	0.13	0.07
	2020	0.06	0.18	0.03	0.04	0.11	0.37	0.13	0.08

Table 8

Share of the average productivity of each employee in generating turnover (STEP)

No.	Size	Year	BG	CZ	EE	LT	HU	PL	RO	SK
1	s1	2018	0.08	0.17	0.12	0.10	0.13	0.13	0.08	0.17
		2019	0.08	0.15	0.16	0.10	0.14	0.12	0.09	0.15
		2020	0.08	0.17	0.12	0.10	0.14	0.13	0.09	0.17
2	s2	2018	0.08	0.16	0.16	0.10	0.15	0.13	0.08	0.15
		2019	0.08	0.15	0.16	0.10	0.14	0.12	0.09	0.15
		2020	0.09	0.15	0.16	0.11	0.13	0.13	0.09	0.15
3	s3	2018	0.07	0.16	0.16	0.10	0.12	0.12	0.08	0.17
		2019	0.07	0.16	0.16	0.11	0.12	0.13	0.08	0.18
		2020	0.08	0.15	0.15	0.11	0.13	0.13	0.09	0.17
4	s4	2018	0.08	0.14	0.18	0.12	0.11	0.12	0.08	0.16
		2019	0.08	0.14	0.16	0.12	0.13	0.13	0.09	0.16
		2020	0.09	0.14	0.17	0.12	0.12	0.12	0.08	0.16
5	s5	2018	0.09	0.13	0.26	0.10	0.10	0.12	0.09	0.11
		2019	0.09	0.13	0.25	0.10	0.11	0.12	0.09	0.11
		2020	0.10	0.13	0.23	0.10	0.10	0.13	0.10	0.11

Table 9

Share of the average productivity of each employee in generating added value (SAVEP).

No.	Size	Year	BG	CZ	EE	LT	HU	PL	RO	SK
1.	s1	2018	0.08	0.16	0.13	0.11	0.14	0.15	0.09	0.15
		2019	0.08	0.16	0.13	0.11	0.14	0.15	0.09	0.15
		2020	0.09	0.15	0.13	0.11	0.13	0.15	0.10	0.15
2.	s2	2018	0.07	0.15	0.17	0.12	0.13	0.14	0.08	0.14
		2019	0.08	0.15	0.17	0.12	0.13	0.14	0.08	0.14
		2020	0.08	0.14	0.17	0.13	0.12	0.14	0.08	0.13
3.	s3	2018	0.07	0.14	0.18	0.11	0.13	0.14	0.08	0.15
		2019	0.07	0.14	0.17	0.11	0.13	0.14	0.09	0.15
		2020	0.08	0.14	0.16	0.12	0.12	0.14	0.09	0.14
4.	s4	2018	0.07	0.14	0.18	0.11	0.13	0.13	0.09	0.14
		2019	0.07	0.15	0.18	0.11	0.12	0.14	0.10	0.14
		2020	0.08	0.14	0.17	0.12	0.12	0.14	0.09	0.14
5.	s5	2018	0.08	0.16	0.21	0.12	0.12	0.10	0.11	0.10
		2019	0.08	0.15	0.22	0.11	0.12	0.10	0.12	0.10
		2020	0.08	0.14	0.17	0.12	0.12	0.13	0.10	0.13

Table 10

The situation of the score obtained by each country at the level of each indicator.

No.	Size	Index	BG	CZ	EE	LT	HU	PL	RO	SK
1	s1	SNE	5	2	8	7	4	1	3	6
		SEP	5	3	8	7	4	1	2	6
		ST	5	2	7	6	3	1	3	4
		SAV	6	2	8	7	4	1	3	5
		STEP	7	1	4	5	2	3	6	1
		SAVEP	5	1	2	3	2	1	4	1
2	s2	SNE	4	3	7	6	4	1	2	5
		SEP	4	3	8	6	7	1	2	5
		ST	5	2	7	6	4	1	3	5
		SAV	5	2	7	6	4	1	3	5
		STEP	5	2	1	4	3	3	5	2
		SAVEP	5	2	1	3	4	2	5	3
3	s3	SNE	4	3	6	5	4	1	2	5
		SEP	4	3	6	5	4	1	2	5
		ST	5	2	7	6	4	1	3	5
		SAV	5	2	7	6	4	1	3	5
		STEP	6	2	2	4	3	3	5	1
		SAVEP	5	2	1	3	3	2	4	2
4	s4	SNE	5	3	8	6	4	1	2	7
		SEP	5	3	8	6	4	1	2	7
		ST	5	2	8	7	3	1	4	6
		SAV	5	2	7	6	4	1	3	6
		STEP	5	3	1	4	4	4	6	2
		SAVEP	7	2	1	3	3	2	6	2
5	s5	SNE	5	7	7	6	2	1	4	3
		SEP	5	2	7	6	3	1	3	4
		ST	6	2	7	7	3	1	4	5
		SAV	6	2	8	7	4	1	3	5
		STEP	4	2	1	4	4	2	4	3
		SAVEP	6	2	1	4	4	3	5	3

In the second category of enterprises (Table 8 – s2), with employees between 50 and 249, improvement appears in BG, LT, and PL (in 2020) by increasing by 1%. Also, here we see a 1% decrease in the indicator in HU (2020). In the third category of enterprises (Table 8 – s3), with employees between 20 and 49, there is a 1% improvement in 2020 in BG, HU, and RO. In CZ, EE, and SK there is a decrease in 2020 of 1%. In the fourth category of enterprises (Table 8 – s4), with employees between 10 and 19, we note the following changes: in BG and EE an increase of 1% in 2020, in HU, PL, and RO a decrease of 1% in 2020. The fifth category of enterprises (Table 8 – s5), with employees between 0 and 9 registered the following changes: in EE a decrease of 1% in 2019 and then a decrease of 2 % in 2020, in HU decrease of 1% in 2019, in BG, PL, and RO increase of 1% in 2020.

Table 9 shows us the situation of the added value per employee, this being an indicator that measures the efficiency with which production is carried out, considering the consumptions trained for its realization. For (s1) there is a decrease in CZ and HU (2020) of 1% and an increase of 1% in BG and RO (2019). In the second category (s2), LT is the country that registers an increase of 1% in 2019 and a decrease of 1% in EE and SK. In the third category (s3), we have in BG and LT an increase of 1% in 2020 and in HU an increase of 1% in 2019. In the fourth category (s4), we have in BG and LT an increase of 1% in 2020. In the fifth category (s5) we have a decrease in PL and SK (2020) of 3% and a decrease in 2020 in EE (5%) and RO (2%).

Comparing the results from Table 6 with those from Table 7, some countries, even if they had a good position for the "Share of turnover" indicator, recorded lower values for the "Share of added value" indicator (see PL, CZ, and RO), which tells us that the cost of the factors makes the difference (causes can be efficiency, effectiveness, and economy).

These shortcomings can be seen even more nuanced at the country level when comparing the results from Table 8 with those from Table 9 where it can be seen in terms of efficiency how much turnover (produced income) and added value return on average per employee. From this comparison, we notice that EE is the country that

has the best results in almost all groups of companies (the only exception being s1), classified according to their size.

Table 10 presents the situation of the countries according to the score received due to the scale of importance used, for the data related to the year 2020. We notice that PL occupies the 1st place among large enterprises (>250 employees) with many enterprises (SNE), employees (SEP)), turnover (T) and in the end it maintains the same position and at the last indicator (SAVEP). A relatively similar situation for companies of s1 size can also be found in CZ. An interesting situation is in s1, in SK, EE and LT, where, being smaller countries, the number of enterprises is smaller, as well as the number of employees, but the value obtained for the SAVEP indicator places these countries on the 1st places (SK and EE) and 2 (LT).

In the enterprises of size s2, s3, s4 and s5, we again observe EE positioned on the 1st place in the last indicator, although in the other indicators it occupies the last places.

In Table 11, a classification of countries was made according to the value added to the cost of factors per employee, obtained by each country. We notice that the companies of size s1 in the area with high economic potential are CZ, PL, and SK. EE also in high economic potential because of the result obtained in all other categories of enterprises (s2-s5).

Table 11

The situation of the ranking of countries by levels of economic potential

No.	Size	Level	Country
1	s1	high	CZ, PL, SK (0.15)
		middle	EE, HU (0.13)
		low	RO (0.10), BG (0.09)
2	s2	high	EE (0.17)
		middle	CZ, PL (0.14); LT, SK (0.13); HU (0.12)
		low	BG, RO (0.08)
3	s3	high	EE (0.16),
		middle	CZ, PL, SK (0.14); LT, HU (0.12)
		low	RO (0.09), BG (0.08)
4	s4	high	EE (0.17)
		middle	CZ, PL, SK (0.14); LT, HU (0.12)
		low	RO (0.09), BG (0.08)
5	s5	high	EE (0.17)
		middle	CZ (0.14); PL, SK (0.13); LT, HU (0.12)
		low	RO (0.10), BG (0.08)

In the middle area at s1 are the countries EE and HU, followed by CZ, PL, LT, SK, and HU.

The countries that are in the area with a low level of economic potential are RO and BG, for all types of enterprises.

4. CONCLUSION

Hypothesis H1 "Do the companies in the studied countries show significant changes in the period 2018-2019 compared to 2020?" it was verified by the analysis carried out at the level of each indicator, which showed us the trend of linear evolution of the countries, with no significant fluctuations in the three years studied (changes of up to 1%).

The second study hypothesis H2 "Does the global contribution of companies in the economy differ from one country to another in terms of efficiency?" it will show us that there are quantitative and qualitative differences between countries that cannot be ignored. Thus, the number of enterprises, the number of employees, the turnover and the added value showed us the quantitative possibility of the countries, and the results at the level of these indicators position us in the first places in almost all types of enterprises in PL, CZ and RO and on last place on EE. Similar considerations have been provided by [48,49]. The indicator "Average productivity of each employee in the generation of turnover" and the indicator "Average productivity of each employee in the generation of added value" were considered qualitative indicators that, by comparison, allowed us to observe differences between countries that can be explained by the different contribution of the combination of human and material factors in obtaining results, in terms of efficiency.

In the end, the result obtained by each country at the level of the indicator "Average productivity of each employee in the generation of added value" was the one that allowed us to classify the countries according to performance. Being a performance indicator, this indicator showed us how big the gains are in the economy when the costs related to the factors that contributed to the realization of production or services were reduced.

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Analiza performanței unor economii în funcție de clasa de mărime a intreprinderilor

Necesitatea dezvoltării economiei prin contribuția întreprinderilor la realizarea bunăstării naționale este o preocupare a fiecărei țări. În cadrul acestui studiu a fost realizată o analiză a unor indicatori statistici de afaceri, existenți în baza de date Eurostat, care permite stabilirea evoluției în funcție de dimensiunea întreprinderilor din sectorul nefinanciar (Industrie, comerț și servicii). Analiza a utilizat cinci indicatori care măsoară situația a opt țări est-europene, în perioada 2018-2020, pentru a semnala îmbunătățiri sau deteriorare a situațiilor. Studiul a folosit două ipoteze de lucru care au fost verificate si ulterior a prezentat evolutia tarilor in anii studiati. Rezultatele obtinute au condus la clasarea tarilor, evaluarea economiilor din perspectiva efectelor obtinute si clasificarea tarilor in tari cu cele mai bune rezultate si tari cu rezultate scazute.

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