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AN ANALYSIS OF THE IMPACT OF THE MACRO-ENVIRONMENT ON THE EFFICIENCY OF SMALL AND MEDIUM-SIZED ENTERPRISES IN THE REPUBLIC OF SERBIA

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Abstract

This paper analyses the influence of macro-environment on the efficiency of small and medium-sized enterprises (SMEs) in the Republic of Serbia (RS) in period from 2004 to 2021. The aim of the paper is to identify the factors that have a positive impact on the SMEs' business i.e. encourage their development, as well as factors with negative impact which limit their further growth. Our starting assumption is that the macro-environment has a positive impact on the development of SMEs due to the fact that number of SMEs and number of their employees and their business performances has been constantly increasing throughout the observed period. By applying regression method, on the sample of 75,000 SMEs (in 2004) to a sample of 109,000 SMEs (in 2021), impact of legal-political, economic, social, technology-related factors on ROA of SMEs in RS is examined. The results show that political instability and inefficiency in relation to the law application are a great hindrance in the development of SMEs in the Republic of Serbia, while the continuous growth of the economic activity (accompanied by an increase in the standard of living), social change (accompanied by collective welfare) and technological improvement have positive effect on the efficiency of SMEs in RS.

Key words: small and medium-sized enterprises, legal-political factors, economic factors, social factors, technology-related factors.

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АНАЛИЗА УТИЦАЈА МАКРО ОКРУЖЕЊА НА ЕФИКАСНОСТ МАЛИХ И СРЕДЊИХ ПРЕДУЗЕЋА У РЕПУБЛИЦИ СРБИЈИ

Апстракт

У раду је испитиван утицај макроекономског амбијента на ефикасност малих и средњих предузећа (МСП) у Републици Србији (РС) у периоду од 2004. до 2021. године. Циљ је био да се идентификују фактори који имају позитиван утицај на пословање МСП, тј. представљају подстицаје њиховог развоја, као и фактори чији је утицај на пословање МСП негативан, тако да представљају ограничење. Полазна претпоставка рада је била да је макроекономски амбијент подстицао развој МСП, с обзиром на чињеницу да се њихов број, број запослених у њима и остварене перформансе константно повећавале. Применом метода регресионе анализе, на узорку од око 75.000 МСП 2004. до 109.000 МСП 2021. године анализиран је утицај законско-политичких, економских, социјалних и технолошких фактора на ефикасност пословања (мерену приносом на улагања) МСП у РС. Резултати су показали да су политичка нестабилност и неефикасност примене закона представљали велика ограничења развоја МСП у РС, док су континуирани раст привредне активности, праћен растом животног стандарда становништва, унапређења у социјалној сфери праћена хуманим развојем становништва и унапређење технологије подстицајно деловали на ефикасност пословања МСП у РС.

Кључне речи: мала и средња предузећа, законско-политички фактори, економски фактори, социјални фактори, технолошки фактори.

INTRODUCTION

SMEs are extremely important both in developed and developing countries and in countries in transition. What best proves this statement is the fact that, on a global level, SMEs make up about 90% of all enterprises, employ over 50% of the entire global workforce and comprise up to 55% of the GDP in developed countries (World Trade Organization, 2022, p. 4). For example, in 2022, the EU had a total of 24.4 million of SMEs out of which 1.32 million were small and 202,278 were medium-sized enterprises (Statista, 2023a). A total of 84.75 million workers were employed in these types of enterprises – to be exact. 65.5 million workers were employed in small, and 20.3 million workers were employed in medium-sized enterprises. Germany is the leader in this field, as it has around 16.5 million people working in these types of companies. On the other hand, Malta has the fewest employees in SMEs in the EU – a total of 155,375 employees (Statista, 2023b). Overall, SMEs in the EU make up 99.8% of all enterprises, and their intake in the employment rate is 64.4%, while it is 51.8% in created value (European Commission, 2022, p. 6). When it comes to the Republic of Serbia, in 2022, SMEs made up 99.9% of all economic entities (Ministry of Economy of the Republic of Serbia, 2022, p. 12, Mijic et al. 2018, p. 110). This stands to show their

importance in the development of the economy, which is considered to be a general trend in the last 20 years. Namely, in 2022, the SME sector employed 965,000 workers, which is 20% more than in 2015. Considering the number of employees in large companies, in 2022, there were 85% less employees in these types of companies as compared to employee numbers in the SME sector; in 2015, there were even less people employed in large companies (91% less than in the SME sector). Moreover, in 2021, small enterprises achieved a revenue of 168,824 million RSD, with a 5% growth rate, while small enterprises achieved a 16% lower positive net revenue. The overall turnover in the SME sector in 2021 was more than 22% higher to that achieved in 2019, while the overall gross value added was 30% greater. Gross value added per employee in the SME sector in 2021 was 1,712.9 RSD, while in 2019, it was 1,375.2 RSD, which is a 25% increase. The export of goods in the SME sector in 2021 increased by 22% as compared to that achieved in 2019 (763.5 billion RSD – 931.7 RSD), while the value of import grew by 24% (1,401.7 billion RSD and 1,738.7 billion RSD, respectively) (Statistical Office of the Republic of Serbia, 2023).

The macro-environment in which the SMEs operate has a rather important role in their development. The environment can be stimulating and encourage the establishment of new businesses and the development of existing ones, or it may have a limiting effect. In the last few decades, the EU has carried out a number of incentive measures in order to enable the development of this sector, which led to an increase in the number of SMEs and their share in both GDP and employment rate. The development of this sector in RS occurred after certain political changes took place (back in 2001). Having in mind that the number of SMEs in RS (as well as the number of people employed in these types of companies) has only been increasing from that point on (Statistical Office of the Republic of Serbia, 2001-2022), one can assume that the macro-environment in RS has improved, and has represented a stimulus to the development of SMEs during the observed period. On the other hand, if the data from certain segments of that environment (such as high level of corruption, problems related to starting and managing a business caused by a number of administrative procedures) (World Bank, 2023a) is considered, there is an impression that the macro-environment in the Republic of Serbia is unfavourable and it limits the development of SMEs. This creates a dilemma over the actual effect of the macro-economic environment in RS on its SMEs' business. The aim of this paper is to solve this dilemma through the analysis of the impact of legal-political, economic, social and technology-related factors of the macro-environment on the business efficiency of SMEs in RS for the period between 2004 and 2021. More precisely, the aim is to understand the situation and identify those elements of the macro-environment which stimulate and have a hindering effect on the

development of SMEs in RS, in order to provide recommendations for the creators of macro-economic policies (and thus contribute to the improvement of the situation in the future).

The paper first offers a review of relevant literature on the effect of the macro-economic environment on SMEs business efficiency. The following part presents the methodology, the obtained results and their discussion. The final part of the paper provides concluding remarks.

LITERATURE REVIEW

There is a large number of studies which deal with the impact of the macro-economic environment on SMEs' business (Indris & Primiana, 2015; Sarwoko & Frisdiantara, 2016; Ajayi, 2016; Akpoviroro & Owotutu, 2018; Adewole & Umoru, 2021, Kralova et al., 2021), from different aspects. This paper will apply the PEST concept. This is an analytical concept which groups the factors of the macro-economic environment into following segments: legal-political, economic, social, and technology-related factors (Maria & Maria, 2023, p. 4).

Politics, laws and regulations which are applied in a particular country can encourage and facilitate the operations of SMEs. On the other hand, they can be rather huge barrier for SMEs development and success (Ajayi, 2016). In their study, Belas et al. (2020) concluded that the stand of governing political parties, the media and public opinion, as well as the stand of institutions run by the government jointly affect the operations of SMEs. Similar conclusions were drawn by Adewole and Umoru (2021), who also stated that the mentioned macro-environment institutions: contribute to the regulation, coordination and the control of the 'behaviour' of business entities; provide help to SMEs in adjusting to changes; and minimise the risks and the level of uncertainty in business operations. Moreover, the stability of the legislative system and an adequate implementation of laws can reduce the chances of certain legal inconsistencies and risks occurrence, whose effects, naturally, cannot be ignored by SMEs, and from which they cannot fully protect themselves (Virglerová et al., 2020, p. 2; Eierle et al., 2022, p. 97).

Beverelli et al. (2018) conducted an empirical research in which they proved that the rule of law and the efficiency of national institutions have a statistically significant impact on the efficiency of a national market (stimulating free competition, preventing unfair competition, and preventing market monopoly) which directly affects the efficiency of SMEs. Furthermore, they stated that the same factors hugely affect SMEs' competitiveness on international markets (Beverelli et al., 2018). Minovic et al. (2021) have investigated the effect of the quality of institutional measures (corruption control, rule of law, political stability and the absence of violence, and government efficiency) on SMEs' efficiency and

the growth of GDP in the countries of South Eastern Europe (observed in the time period between 1996 and 2016). Their results show that political instability and lack of corruption control have a negative effect on SMEs' business and GDP.

Research conducted in RS has shown that the institutional environment in RS as a political situation has had a negative trend in the last couple of decades. Djukic (2013) says that "what is precisely lacking in terms of reforms and economic development in RS is the governance" (p. 177). Minovic and Stevanovic (2021) have analysed the institutional environment in RS for the time period between 1996 and 2019, taking into consideration the following indicators: voice and responsibility, political stability and the absence of violence, government efficiency, regulatory quality, rule of law, and corruption control. They show that, throughout the entire observed period, the average value of all indicators was been negative, with rule of law having the biggest negative impact, followed by political stability and the absence of violence and corruption control. In line with these conclusions the assumption is that the legal-political system has a negative effect on the development of the SME sector in RS. Therefore, our first hypothesis (H1) is:

The institutional environment has a negative impact on efficiency, and limits the development of the SMEs sector in RS.

Economic factors refer to the value of GDP, fiscal and monetary policy, unemployment rate, inflation rate, capacity utilisation, exchange rate, economic growth, public expenditures, and economic stability (Maria & Maria, 2023, p. 5, Lekpek & Sabotic, 2023, p. 318). Previous research has shown that the stability of the economic system is one of the key factors affecting the operations of SMEs (Virglerová et al., 2020, p. 2). Empirical research shows that economic indicators (inflation, interest rate, exchange rate, unemployment rate) have a significant effect on SMEs performance, while monetary policy and people's consumption do not have a statistically significant impact (Nnenna et al., 2020; Dvorský et al., 2020). Bekeris (2012) concludes that unemployment has the biggest effect on SMEs profitability; in this type of situation, SMEs can hire qualified workers for less money, which would then have a positive effect on their financial performance.

When it comes to Serbia's economic environment, the last decades have had positive trends. According to WB data (World Bank) and the Doing Business report, the business environment in the Republic of Serbia has drastically improved. For example, in 2006, the Republic of Serbia ranked 92nd globally, while it occupied the 44th place (out of 190 ranked countries globally) in 2020 (World Bank, 2020). According to the World Economic Forum data presented in the form of a Report on global competitiveness, the Republic of Serbia has experienced significant change in terms of improvements with the issue of competitiveness; how-

ever, certain problems still remain. The most problematic factors in relation to SMEs' business in RS are: taxes (which are rather high), inefficiency in relation to state bureaucracy, the lack of external sources of financing and high level of corruption, access to financial services, technological advancements at company level, innovation capacity, and investment in R&D at company level. The Report on global competitiveness for 2019 places the Republic of Serbia in 72nd place on the list of 141 observed world economies (World Economic Forum, 2019). Besides the numerous problems that remain in the economic sector, it can be concluded that certain positive results have been achieved in the previous period in relation to the enhancement of the quality of the business environment. Therefore, the second hypothesis (H2) is:

Economic factors have a positive effect on efficiency, and represent a stimulus to the development of SMEs in RS.

Social factors include the values, beliefs, habits and public opinions which shape an individual's personality, national culture and social system, which determine their preferences and the inclination towards certain products and services (Ajayi, 2016, p. 162). Moreover, these factors include the healthcare system, social culture and the population's education.

Sarwoko and Frisdiantara (2016) conclude that individual management factors of SMEs i.e. those factors referring to the manager's/owner's education, experience, motivation, family heritage, personal traits and competencies, affect the growth of SMEs. The aim is to make use of these individual management factors (to the best of our abilities) in order to create SMEs' efficiency, become competitive on the market, and oversee changes in the business environment.

In their research, Gries and Naudé (2011) focused on monitoring the connection between social factors and SMEs based on the Human Development Index (HDI). The HDI entails three key segments: education, healthcare system and the standard of living in a particular country. Obschonka et al. (2011) proved that the development of entrepreneurship and the success of SMEs are greatly connected to the degree of human development, especially at the level of top management. A higher level of human development contributes to better customer perception and highly-developed managerial skills, which directly affects the success of SMEs (Obschonka et al., 2011). Gries and Naudé (2011) state that a low level of human development on a national level can make it more difficult for individuals to recognise business opportunities, thus putting them in a situation in which they start a business out of necessity (businesses proven to be the least efficient). Based on a sample of 134 countries, Doan (2021) describes the link between human development and SMEs as a rather strong one; moreover, this research has also shown that HDI has a great effect on the development of SMEs.

There are a few empirical research papers on the relation between social factors and the success of SMEs in RS. However, global indicators in this sector have shown positive trends in the past few decades. According to the global competitiveness index, the biggest success that Serbia achieved in this area is the one related to business dynamics (World Economic Forum, 2019). Moreover, the HDI for RS has been improving year after year. Based on this, it can be expected that the social sector has a positive impact on the efficiency of SMEs' business in RS. The third hypothesis (H3) is:

Social factors have a positive impact on efficiency, and represent a stimulus for the development of SMEs in RS.

Technology-related factors refer to the level of technology advancement, the use of digital technology and internet access, and investment in R&D in relation to the development of new technology and products/services (Akpoviroro & Owotutu, 2018, p. 501).

Previous research has shown that technology greatly affects the efficiency of SMEs (Murat & Baki, 2011; Hajar, 2015; Boskovic et al. 2016; Sarwoko & Frisdiantara, 2016, Abbasi et al., 2021). Setiowati et al. (2015) concluded that the application of ICT in SMEs' operations positively affects their marketing capacity which, in turn, significantly determines their market opportunities and the business performance of a company. This is confirmed by research by Ukpabio et al. (2017), conducted on a sample size of 305 SMEs in Nigeria. Chege et al. (2020) concluded that innovations in ICT positively affect SMEs' performance, and that an entrepreneur has a critical role in the development and implementation of innovative business strategy. Sarwoko and Frisdiantara (2016) conclude that those SMEs that use modern technology are more efficient, as they produce different and diverse products which make them competitive on the market. Abbasi et al. (2021) conclude that introducing financial technology in the business activities of SMEs contributes to greater efficiency, as it enables the enhancement of credit activities, procuring assets in a faster manner and with lower interest rates.

Certain research studies (Milanović, 2016; Kahrovic & Avdovic, 2023) conducted in Serbia have mentioned the significant positive effect of digital technology on the performance of business entities. In the study conducted by Milanović (2016), it was found that the possibilities offered by the Internet, e-commerce and ICT have been insufficiently used in RS (74% of SMEs have a webpage which is only used for informative purposes i.e. customers can find information on the company's products and services, but cannot buy them online, 21% of webpages have an online shop, 11% of webpages allow for online payment). However, a recent study conducted by Kahrovic and Avdovic (2023) shows that the situation has drastically improved (due to the COVID-19 pandemic). A greater number of people buy products online, and internet access is far more

widespread with all age groups, which has positively affected the degree of digitalisation and e-commerce in RS in general. Also, according to the Network Readiness Index Report, the Republic of Serbia achieved significant progress in digitisation, so that it was ranked as 57th out of 130 countries in 2021 (The International Telecommunication Union – ITU, 2021). This is why it is assumed that this factor has a positive effect of SMEs development in Serbia. Therefore, the next hypothesis (H4) is:

Technology-related factors have a positive effect on efficiency, and represent a stimulus for the development of SMEs in RS.

THE CONTEXT OF THE RESEARCH

The Republic of Serbia is a country in transition which has witnessed the growth of the SME sector, after certain political changes in 2001 (Filipovic, 2003). The new Government recognised the importance of the SME sector as the key driving force of economic development – this meant the implementation of a large number of measures in order to reform and further develop the sector. Due to a large number of implemented measures, the number of SMEs has increased, together with the enhancement of their business performance (as seen in Figure 1).

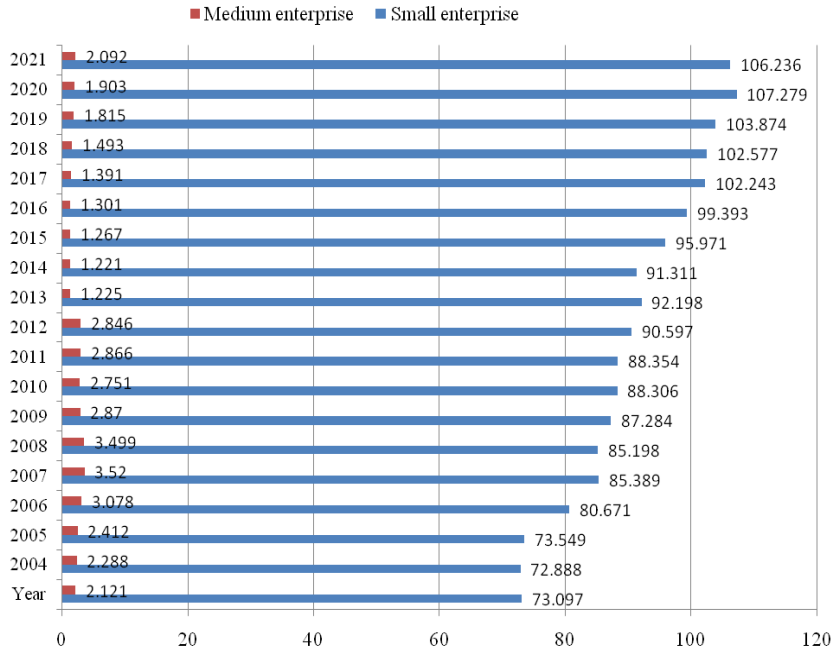

Figure 1. The number of SMEs in RS for the time period 2004-2021
Source: Serbian Business Registers Agency (2004-2023).
Financial statements annual bulletins from 2004-2022. Belgrade

The new Government adopted a new strategy for the development of small and medium-sized enterprises, and founded a national Agency for the development of SMEs and offices for the local development of SMEs (on a local level). It even implemented a project aimed at developing clusters and business incubators, and started a Development Fund which gave loans with favourable interest rates to SMEs, launched an innovation fund which gave innovation grants to SMEs, and opened science and technology parks, accelerators and start-up centres (Stefanovic & Ivanovic-Đukic, 2015).

Sample Description

The data used for the analysis of SMEs' operations in the Republic of Serbia was taken from the Serbian Business Registers Agency's financial statements annual bulletins, which are published for each calendar year, encompassing data for SMEs that have handed in their financial reports. The number of SMEs and their business results have changed throughout the observed period (2004-2021) (table 1).

Table 1. Descriptive statistics

	Min	Max	Mean	Std. Dev.
Number of enterprises				
Small	73.097	107.279	88.994,12	10.023,79
Medium	1.221	3.520	2.233,18	819,47
Number of employees				
In small enterprises	356.699	553.790	434.455,65	79371,70
In medium enterprises	199.576	273.115	234.402,53	24.480,66
Current assets				
In small enterprises	492.947.451	3.277.504.125	1.782.920.640,24	967.803.399,12
In medium enterprises	260.673.764	1.549.440.137	844.819.511,41	326.332.624,95
Fixed assets				
In small enterprises	411.770.580	2.976.862.178	1.557.935.451,12	914.833.787,44
In medium enterprises	445.024.766	1.888.471.036	1.083.208.084,76	391.874.940,36
Borrowed capital				
In small enterprises	638.641.041	4.900.248.630	2.516.787.840,29	1.483.355.799,18
In medium enterprises	343.343.506	2.082.033.314	1.200.119.677,00	467.014.714,87
ROA				
In small enterprises	1,67	6,77	3,96	1,52
In medium enterprises	0,52	6,38	3,26	1,81

Source: Serbian Business Registers Agency (2004-2023).
Financial statements annual bulletins from 2004-2022. Belgrade.

Research Models and Variables

In order to test the defined hypotheses, correlation and regression analyses were applied. The dependant variable in this model was the efficiency of SMEs in RS, whereas several indicators from each segment of the environment were selected for the analysis of the macro-environment. The list of variables is presented in Table 2.

Table 2. *Variables used in the research*

	Indicators
ROA	Return on Assets
PSAV	Political stability and the absence of violence
RL	Rule of law
GDPPC	GDP per capita
GDPG	Gross Domestic Product Growth
HDI	HDI index
%PI	% of the population that uses Internet
%GDPRD	% GDP for research and development

ROA (return on assets) was used to monitor the efficiency of SMEs. It is calculated as the quotient of achieved profit and total capital employed (Figure 2).

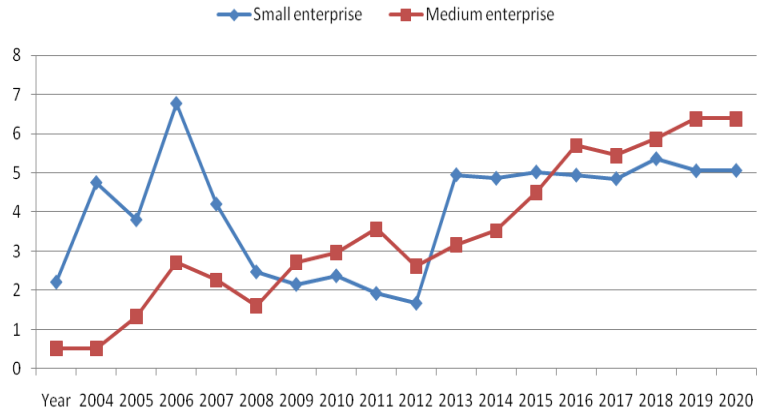

Figure 2. SME rentability for the time period 2004-2021 (presented in %)
Source: Serbian Business Registers Agency (2004-2023).
Financial statements annual bulletins from 2004-2022. Belgrade.

When it comes to independent variables, for the purpose of this research, we used indicators from each sector of the macro-environment for which there was available data for the Republic of Serbia (for the observed period). The indicators that were identified as ones with the greatest effects, based on previous research, were chosen as variables in this research, too.

Indicators used to monitor the legal-political sector were PSAV and RL. PSAV is an indicator which measures the perception of probability that a government will be destabilised so that it turns against its current constitution (Minovic & Stevanovic, 2021, p.305). RL reflects the perception of the extent to which the rules of a certain society are applied and believed in, including the quality of contract enforcement, property rights, police and court efficiency, and crime and violence rate (World Bank, 2023b).

The analysis of economic factors was performed based on GDPPC and GDPG. Data was taken from the WB database. The GDPPC calculation methodology implies that the achieved value of GDP is divided by the size of the population in a particular country (World Bank, 2023v).

The analysis of the social sector was conducted based on HDI. This is a composite index of 3 indicators which are used to monitor human development in a country (Doan, 2021). The first dimension refers to the possibility of having a long and healthy life, measured through the life expectancy rate. The second dimension – chances of acquiring education, refers to the expected number of years of schooling a child is to receive. The third dimension is the standard of living, measured via GDPPC (United Nations, 2022).

Technology-related factors are observed through two indicators: %PI and %GDPRD. The values of these indicators are taken from the WB website (World Bank, 2023dj; World Bank, 2022g).

Table 3. The values of selected indicators of macro-environment in RS (2004-2021)

Year	PSAV	RL	GDPPC	GDPG	HDI	%PI	%GDPRD
2004	28,64	28,23	3.331,22	-	0.730	23	0,305
2005	24,76	21,05	3.528,13	5,91	0.739	26	0,417
2006	28,50	37,32	4.129,75	17,05	0.743	27	0,466
2007	26,09	39,23	5.458,12	32,17	0.749	33	0,619
2008	27,40	37,02	6.701,77	22,79	0.754	35	0,711
2009	29,38	42,18	5.821,30	-13,14	0.755	38	0,866
2010	31,28	42,65	5.411,87	-7,03	0.757	40	0,744
2011	36,97	46,48	6.423,29	18,69	0.767	42	0,724
2012	38,86	44,60	5.659,38	-11,89	0.766	48	0,908
2013	43,13	45,54	6.353,82	12,27	0.771	53	0,726
2014	40,48	50,96	6.200,17	-2,42	0.775	62	0,769
2015	55,24	52,40	5.237,25	-15,53	0.776	65	0,866
2016	48,10	50,00	5.348,29	2,12	0.785	67	0,891
2017	49,52	48,56	6.292,54	17,66	0.802	70	0,872
2018	46,70	50,00	7.252,40	15,25	0,808	73	0,918
2019	45,28	50,48	7.417,20	2,27	0,811	77	0,886
2020	41,98	51,44	7.730,69	4,23	0,804	78	0,905
2021	43,40	50,96	9.214,99	19,20	0.802	79	0,907

Source: World Bank (2023b). *Worldwide governance indicators.* http://info.worldbank.org/governance/wgi/#home (1.9.2023.)

RESULTS AND DISCUSSION

The main findings informed by the results of our analysis are given in this section. To begin with, Table 4 shows the results of the descriptive statistics.

Table 4. Descriptive statistics

Variables	Minimum	Maximum	Mean	Std. Dev.
PSAV	24,76	55,24	38,09	9,02
RL	21,05	52,40	43,83	8,37
GDPPC	3.331,22	9.214,99	5.972,89	1.420,91
GDPG	-15,53	32,17	7,03	13,48
HDI	0,730	0,811	0,771	0,024
%PI	23	79	52	19,05
%GDPRD	0,305	0,918	0,75	0,18
ROA				
Small enterprises	1,67	6,77	4,02	1,45
Medium enterprises	0,52	6,38	3,43	1,85

Source: Serbian Business Registers Agency (2004-2023).
Financial statements annual bulletins from 2004-2022. Belgrade.

The link between independent and dependent variables was measured using correlation – the results of the analysis are presented in Table 5.

Table 5. Correlation analysis

Correlation	ROA	PSAV	RL	GDPPC	GDPG	HDI	%PI	%GDPRD
ROA	1.000	.801*	.729**	-.878	-.743	.699**	.893**	-.864*
	1.000	.803*	.934*	.623**	.549*	-.749**	.681**	.697**
PSAV		1.000	.912*	.639	.876	.891*	.799	.937
		1.000	.691	.789	.891	.963*	.851*	.748**
RL			1.000	.843*	.911*	.869*	.784**	.694
			1.000	.684**	.901	.629	.861	.794
GDPPC				1.000	.969	.982*	-.617**	.761
				1.000	.899**	.796**	.637	.894*
GDPG					1.000	.792	.691	.794
					1.000	.810*	.589	.869*
HDI						1.000	.841**	.622**
						1.000	.899**	.633
%PI							1.000	-.803*
							1.000	.691**
%GDPRD								1.000

**Correlation is significant at the 0.05 level (2-tailed).
*Correlation is significant at the 0.10 level (2-tailed)
Source: Author's findings

The first-row indicators (for each indicator) refer to small enterprises, while the second-row indicators refer to medium-sized enterprises.

A strong and statistically significant correlation between ROA and all examined independent variables is obvious. ROA is indirectly connected to %GDPRD (-0,864, significant at the 10% level), which means that an increase of GDPRD, i.e. the growth of %GDPRD, leads to a drop in ROA value, and vice versa. A possible explanation for this finding is that the research was conducted in the same year, and that the effects of R&D investments are perceivable only after three to five years. On the contrary, a very strong, direct and statistically significant correlation exists between ROA, on the one hand, and %PR, PSAV and HDI, on the other hand.

When it comes to medium-sized enterprises, the strongest, statistically significant, correlation is observed between ROA and RL (at the 10% level of significance), and ROA and PSAV (also at the 10% level of significance). It is in an indirect negative correlation with HDI (-0,749, significant at the 5% level). This shows that any increase in the HDI value will cause a drop in the ROA value, and vice versa.

In order to investigate the impact of the chosen indicators on the ROA of SMEs in RS, regression analysis was applied. The results are shown in Table 6.

Table 6. The impact of macro-economic factors on RS SMEs' rentability

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
(Constant)	-5.410	6.213		-.749	.091
	-4.477	5.271		-.801	.091
PSAV	.216	.000	-2.103	.512	.023
	.416	.000	-2.243	.452	.019
RL	.123	.000	1.196	.451	.036
	.107	.000	2.300	.731	.027
GDPPC	-.269	.001	1.213	.387	.096
	-.301	.000	1.007	.417	.069
GDPG	.326	.002	1.098	.581	.064
	.289	.001	1.739	.451	.070
HDI	.369	.004	1.743	.412	.074
	.328	.001	1.873	.372	.087
%PI	.401	.001	-2.139	.289	.061
	.497	.002	-1.107	.179	.043
%GDPRD	-.179	.000	1.001	.471	.089
	-.246	.001	1.977	.101	.031
R	.901				
	.897				
Adjusted R^2	.771				
	.810				

Dependent variable: ROA
Source: Author's findings

First-row indicators (for each indicator) refer to small enterprises, while the second-row indicators refer to medium-sized enterprises.

Table 6 shows that the legal-political sector has a statistically significant, but negative impact on the efficiency of both types of enterprises. This means that this environment sector represented a limitation to the development of SMEs in RS in the last 20 years. Thus, the first hypothesis is proved and accepted. The obtained results are in line with the findings of the research conducted by Minovic and Stevanovic (2021), which have also proved that the indicators of the institutional environment have an enormous effect on national efficiency. In order to improve the situation in the future, it is necessary to insist on some rather radical institutional changes – this is necessary in order to enhance the values of institutional parameters and create a stable legislative framework which would consequently have a positive effect on the efficiency of business entities.

The impact of economic factors on the efficiency of SMEs is statistically significant, with positive effects on SMEs' efficiency. This proves that the stability of the economic system in a particular country is an extremely important factor in the overall national economy. This proves the second hypothesis, which is thus accepted. The obtained results are in line with Beck and Levine's (2003) findings – namely, they concluded that there is a statistically significant and huge economic impact of the size of GDPPC on the SMEs growth and development in a particular country. Economic policy measures should create a stimulating business environment, which will facilitate the founding of SMEs and their work. These measures include new indicators of both financial and non-financial support to the growth and development of SMEs, and a reform of the tax system. Also, Kalash et al. (2020) conclude that the examined economic factors (gross domestic product, inflation, real interest rate) in 13 countries of Southeast Europe affect the profitability of banks. They note that policy makers must ensure safe economic growth with controlled inflation, as a necessary condition for the greater profitability of economic entities.

The impact of social factors (analysed through HDI) on the efficiency of SMEs in RS was also positive and statistically significant. This shows that human capital is an extremely important factor in any company, particularly in SMEs where, due to a smaller number of employees, each employee is considered a key link in the entire chain of business operations. This allows us to say that the third hypothesis is accepted. The obtained results correspond to the findings by Doan (2021), who states that the human factor has the most important role in the birth and development of entrepreneurship. Doan states that each country must have well-devised policies which contribute to the enhancement of human development, which ultimately leads a promotion of entrepreneurial activity on a national level.

Additionally, the data from Table 6 proves that the examined impact of technology-related factors on the efficiency of SMEs in RS was positive and significant. The modern business environment makes it necessary for each business entity to have access to the Internet, to form part of a wider digitalisation process, and decide for e-commerce if the entity intends to survive and prosper on both the domestic and the international market. This proves the fourth hypothesis. The obtained results are in line with the study conducted by Milovanovic (2016). This study mentions that the Internet, e-commerce and ICT potential are not sufficiently used, although there are no impediments to it. He suggests that all business entities must create their own webpages so that they are designed as places where customers can buy and pay online, going beyond a mere e-brochure. He added that the degree of internet coverage must be higher so that more people and more business entities have access to the Internet for a reasonable price. Strong competition among business entities can lead to a higher quality of products and services on this market. Also, in their work, Nikolic et al. (2022) emphasise the importance of innovation and e-commerce in the business of SMEs, especially during the period of the COVID-19 pandemic, but also later, considering the newly adopted habits of consumers. They conclude that new technologies, processes of digital transformation and constant innovation happen very quickly, and are a condition for the further successful work and progress of SMEs.

CONCLUSION

Macro-economic indicators determine the quality of SMEs' business environment. It should promote and stimulate their work by creating favourable and attractive business opportunities. SMEs experience certain difficulties when it comes to predicting the changes in the external environment. This is why it is important for them to be prepared and make use of favourable conditions, to mitigate the negative effects which stem from the unfavourable fluctuations of factors of the macro-economic environment. Therefore, SMEs have to constantly search for new knowledge, enhance their skills and strengthen the existing capacities so that they are more or less ready to predict the changes in their business operations. The cooperation between governments, other entities that create conditions in the external business environment and SME representatives is necessary in order to overcome challenges and create favourable conditions in the environment, in which SMEs will have a chance to survive. This would reduce the number of SMEs that have had to stop operating, particularly in the early years of the business venture when these types of businesses are most vulnerable. It is inevitable that SME entrepreneurs must be aware of the constant challenges of the complex external business and life environment. It is certainly desirable to create a favourable ambience for

a healthy and sustainable development of SMEs, bearing in mind their importance and their role in developing countries such as Serbia. This research actually points to the importance of four segments of the macro-environment, wherein each of these segments must be understood properly, and considered through all its implications on both the operations and the results of SMEs.

This research has certain limitations. First, as a dependant variable, we analysed those SMEs which have fulfilled their due liabilities and have sent their financial reports to the Business Registers Agency (not all businesses that were operational in a single calendar year). Second, as an independent variable, we analysed the minimal number from each group of variables; this implies that future research can expand to include each of the analysed segments (political, economic, sociological, and technological).

Future researchers can expand their research so as to include the legal, demographic, ethnic, natural, global and financial environment, as all of these segments of external environment can affect the business operations of SMEs. This type of 'wider' research will help the owners and managers of SMEs to be better and faster in identifying possible treats and opportunities occurring in the overall macro-environment.

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АНАЛИЗА УТИЦАЈА МАКРО ОКРУЖЕЊА НА ЕФИКАСНОСТ МАЛИХ И СРЕДЊИХ ПРЕДУЗЕЋА У РЕПУБЛИЦИ СРБИЈИ

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Резиме

Сектор МСП има све већи значај за привредни развој. У исто време, МСП не послују у вакуму, већ на њих велики утицај може имати макроекономски амбијент. ЕУ и већина развијених земаља света последњих деценија континуирано ради на унапређењу макроекономског амбијента како би се он учинио подстицајним за развој МСП. Када је у питању Србија, до озбиљног поклањања пажње МСП долази 2002. године, када је спроведен велики број мера у правцу унапре-

ђења пословног амбијента, не би ли се убрзао развој наведене групе привредних субјеката. И поред тога што је у многим сегментима дошло до очигледних позитивних помака, још увек је присутан велики број проблема (као што су висок степен корупције, присуство сиве економије, законско-политичка нестабилност итд). Зато постављају питања да ли је макроекономски амбијент подстицао или ограничавао развој МСП током последње две деценије, те који фактори унутар њега су имали значајан позитиван/негативан утицај на развој МСП у РС.

Да би се одговорило на ова питања, спроведено је емпиријско истраживање у периоду од 2004. до 2021. године, где се број МСП кретао од 75.000 до 109.000, а испитивали смо утицај законско-политичких, економских, социјалних и технолошких фактора на ефикасност пословања (мерену приносом на улагања) МСП у РС. Резултати су показали да су политичка нестабилност и неефикасност примене закона представљали велика ограничења развоја МСП у РС, док су континуирани раст привредне активности, праћен растом животног стандарда становништва, унапређења у социјалној сфери праћена хуманим развојем становништва и унапређење технологије подстицајно деловали на ефикасност пословања МСП у РС. У складу са добијеним резултатима, дате су препоруке креаторима политика како би се унапредио пословни амбијент у будућности и подстакао развој МСП у РС.