


# Comparative analysis of key personal traits of SME owners and managers. A perspective from business sectors


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## ABSTRACT

**Research background:** The owner and manager of a small or medium-sized enterprises (SMEs) is the key person responsible for the management and operation of the company. The personality traits of an entrepreneur play an important role in the future direction and sustainability of SMEs in the business environment.

**Purpose of the article:** The aim of the article is to verify and quantify the effect of the country of business and the business sector on the perception of the key personality traits of an entrepreneur. The research was conducted based on the analysis of the subjective attitudes of SME owners and managers who conduct business activities in the business environment of V4 countries.

**Methods:** The empirical research was conducted on a sample of 1,090 SMEs in four Central European countries using a questionnaire. Data collection was carried out by an external agency, which contacted SMEs through random selection from an internal database. The questionnaire was provided to respondents in their national language for better understanding. The statistical hypotheses were evaluated and verified using IBM SPSS Statistics software.

**Findings & Value added:** Creativity, flexibility, and proactivity of entrepreneurs are perceived as key personality traits in the SME segment within the business environment of V4 countries. According to the attitudes of SME owners and managers, the country of business and business sector are significant characteristics that determine the perception of the most important entrepreneurial personality trait. Entrepreneurial creativity is seen as the key trait in the services sector (29.8%) and the manufacturing sector (28.9%). On the other hand, flexibility is the key trait in the construction sector (38.8%) and tourism (36.8%). Creativity is considered the most important trait by the largest number of SMEs in Poland (38.5%). Flexibility is perceived as the key trait by Czech (32.9%), Hungarian (36.4%), and Slovak (36.4%) SME owners and managers. In the services sector, Polish SMEs perceive creativity as a significantly less important trait compared to SMEs in the Czech Republic, Hungary, and Slovakia. In the retail sector, there are no significant differences in the perception of key personality traits of entrepreneurs among V4 countries.

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## INTRODUCTION

Small and medium-sized enterprises (SMEs) have a significantly positive impact on the national economy (Jovanović et al., 2018; Khosla & Gupta, 2017). SMEs are often the primary source of employment. In many countries, they make up the majority of jobs, helping to reduce unemployment and create stable conditions for economic growth (Sanda, 2024). SMEs can quickly adapt to changing market conditions, allowing them to survive even during economic fluctuations (Hosain et al., 2024). This flexibility gives them the ability to manage crises and recover faster than larger enterprises (Anwar & Clauß, 2021). SMEs contribute to government tax revenues through various forms of taxes, which in turn support public services, infrastructure, and social programs. Many SMEs are active in international trade, contributing to export growth and increasing the global presence of the national economy. Cohen et al. (2023) argue that SMEs often specialize in specific products or services, enabling them to compete in the global market. The authors add that SMEs can quickly adapt to changing market conditions, allowing them to survive even during economic fluctuations. This flexibility gives them the ability to manage crises and recover faster than larger enterprises. SMEs increase diversity in the economy by providing a wide range of products and services. This creates a competitive environment that leads to improved quality and lower prices, benefiting consumers (Kozubíková et al., 2018).

The impact of the owner on the performance and future direction of SMEs is crucial, as the owner often plays a key role in strategic decision-making, day-to-day operations, and the overall management of the business (Barber et al., 2024; Tisu & Vîrgă, 2022). The owner's influence on SME management is particularly evident in the following areas: business strategies and vision, financial management, decision-making, building business relationships, company reputation, business culture, and leadership (Sualeh Khattak et al., 2024; Marconatto et al., 2022). Franco & Prata (2019) believe that successful SME entrepreneurs often exhibit a combination of risk-taking, decisiveness, optimism, a strong need to achieve success, an internal locus of control, and high entrepreneurial self-efficacy. Additionally, traits from the Big Five model (Janowski & Szczepańska-Przekota, 2022), particularly extraversion, conscientiousness, and openness to experience, play a key role in their performance and growth (Amin et al., 2024).

The personality traits of an entrepreneur are crucial in the context of business activities, as they influence how the entrepreneur manages their business, makes decisions, and responds to challenges (Abdul et al., 2019). Key traits such as creativity, flexibility, proactivity, risk management, and innovativeness can positively impact the growth and sustainability of the business (Tamim et al., 2024; Thai & Mai, 2023). Strong personality traits can help entrepreneurs better adapt to market changes, identify new opportunities, and effectively lead their team (e.g. Zheng et al., 2022; Adams & Jiang, 2017).

The originality of the conducted research lies in deepening empirical knowledge and understanding of the key personality traits of small and medium-sized enterprise owners and managers. The business environment of four Central European countries (V4 countries) was analyzed using a uniquely designed questionnaire.

The structure of the article is as follows. The introduction explains the importance and need to provide empirical findings on the issue of key personality traits of entrepreneurs, specifically for the SME segment. The critical literature review includes recent scientific studies focused on analyzing the significance of the personality profile of owners and managers. The following section defines the aim of the article, the data collection methodology, the formulation of statistical hypotheses, methods for their verification, and the structure of respondents. The empirical results present the process of evaluating statistical hypotheses and their economic interpretation. A brief discussion of key findings follows. In the conclusion, the authors define the key findings, limitations, and future directions for the authors' scientific and publication activities.

## THEORETICAL BACKGROUND

Several authors have stated that proactivity, flexibility, innovativeness, and risk aversion, and creativity are important characteristics of an entrepreneur that help improve the sustainability of business activities (Chouchane & St-Jean, 2024; Kozubíková et al., 2017; Kozubíková et al., 2015). Bag & Omrane (2021) conducted quantitative research on a sample of 182 Indian entrepreneurs in the SME segment. The authors found that personality traits have a significant impact on the decision-making process in the context of new business models.

Flexibility, as a key personality trait of an SME owner or manager, plays a crucial role in the success and sustainability of the business (Leonelli et al., 2022). This trait is reflected in the ability to adapt to changes in the business environment, respond to new challenges, and make quick decisions in critical situations. Flexibility is essential for the business to adjust to market conditions, organizational changes and management, as well as in communication and leading employees (Chouchane & St-Jean, 2024). Dvorský et al. (2023) said, that flexibility is also important when adapting to legislative and regulatory changes that may impact the business environment. Quick adaptation to new laws and regulations is key to the continued success of the business (Popp et al., 2018). Flexibility allows SME owners and managers to quickly respond to unforeseen events, such as economic crises, pandemic restrictions, or regulatory changes. The ability to adapt business strategy and operations can ensure survival and success even in challenging times (Dvorský et al., 2023).

Entrepreneurs who demonstrate creativity are more likely to identify unique opportunities, develop innovative solutions, and differentiate their business from competitors (Puerta Gómez et al., 2024). Creativity enhances the

ability to solve complex business problems with unconventional approaches, allowing entrepreneurs to overcome challenges that could hinder business growth (Amin & Oláh, 2024). Creative entrepreneurs are able to think outside the box and develop new or improved products and services that meet changing market demands, fostering customer satisfaction and loyalty (Sanda, 2024). Jovanović et al. (2018) analysed the impact of creativity and innovation on business development in a sample of 717 SMEs from Serbia. His empirical findings indicate the positive effects of creativity among owners and managers on the development of SME businesses.

Proactive entrepreneurs are willing to take calculated risks. They often pursue new business opportunities, such as entering new markets or investing in research and development, even when there is uncertainty about the outcomes (Munir et al., 2019). Proactive entrepreneurs actively seek out opportunities to expand their network (Altınay et al., 2022). They build relationships with key stakeholders, including suppliers, customers, and investors, which can help them stay ahead in the business world and secure valuable resources (Thai & Mai, 2023). Proactivity in the SME segment involves foresight, taking initiative, and being willing to invest in future growth. These entrepreneurs are not content with the status quo; they actively seek out and create opportunities, positioning their businesses for long-term success (Kickul & Gundry, 2002).

Kozubíková et al. (2017) analysed the personality traits of 1,141 SMEs operating in the business environment of the Czech Republic. The authors concluded that innovativeness and proactivity are significant personality traits of owners and managers, which determine the propensity for entrepreneurship. Barber et al. (2024) stated that the SME owners' proactive behavior, particularly in terms of innovation, is crucial for enhancing firm performance. Owners with a promotion focus are more likely to engage in radical innovation, which can positively impact performance, although this relationship is complex and moderated by the type of innovation and regulatory focus.

## RESEARCH OBJECTIVE, METHODOLOGY AND DATA

The aim of the article is to verify and quantify the effect of the country of business and the business sector on the perception of the key personality traits of an entrepreneur. The focus of the research is to define the key personality traits of an entrepreneur. The following traits were analysed: proactivity, creativity, flexibility, innovativeness, autonomy, competitive aggressiveness, risk aversion, and others.

Research was realised in V4 countries— Hungary (HU), Poland (PL), Czech Republic (CR), Slovak Republic (SR). The research sample consisted of 1,090 SMEs from V4 countries. A broad team of authors (University of Zilina (SR), Tomas Bata University of Zlin (CR), Gdansk University (PL), John von Neumann University (HU), and so on) defined the key personality traits of an entrepreneur based on a critical literature review. Data collection

was conducted by an external agency. Data collection was conducted at the turn of the calendar year, December 2023/January 2024. The respondent was defined as the owner or top manager of an SME conducting business in one or more V4 countries.

The questionnaire consisted of several sections: demographic questions about the SME (country, size of enterprise, type of enterprise, locality of business, time period in business, and so on), demographic questions about the respondent (age, gender, highest education level, position in business, and so on), a question regarding the key personality trait of an entrepreneur (only one answer option), questions about financial performance and the sustainability of the business in the SME segment, and others.

## Statistical hypotheses formulations

- SH1: There is a statistically significant difference of perception on the key personality trait according to the country of doing business in SME segment of V4 countries.
- SH2: There is a statistically significant difference of perception on the key personality trait according to the business sector in SME segment of V4 countries.
- SH3: There is a statistically significant difference of perception on the key personality trait according to the country of doing business in service (SH3a) and retailing (SH3b) SME segment of V4 countries.

The statistical hypotheses were verified using the following procedure. First, descriptive characteristics were calculated in the form of absolute and relative frequencies. Subsequently, the statistical tests Chi-square test and Z Score Calculator for 2 Population Proportions were used. Benefits of application of Chi-square test: (1) the Chi-square test does not require assumptions about the population distribution, making it suitable for categorical data and non-normal distribution; (ii) the results of the Chi-square test are straightforward, providing a simple way to evaluate whether observed differences are statistically significant; (iii) Chi-square test can handle both small and large datasets, making it flexible for various types of research.

Demographic structure of SMEs was as follows (n = 1,090): (i) country of doing business: 301 (PL); 362 (CR), 162 (SR), 265 (HU); (ii) size of enterprise: 704 (microenterprises), 264 (small enterprises), 122 (medium enterprises); (iii) type of enterprise: 589 (sole trader), 405 (limited liability company), 70 (joint-stock company), 26 (another form); (iv) business sector: 151 (manufacturing), 235 (retailing), 139 (construction), 60 (transportation), 34 (agriculture), 87 (tourism), 339 (services), 45 (another area); (v) time period in business: 239 (less than or equal to 3 years), 263 (more than 3 and less than or equal to 5 years), 223 (more than 5 and less than or equal to 10 years), 365 (more than 10 years); (vi) locality of business: 427 (capital), 663 (others city).

## RESULTS

### Comparison between V4 countries

Structure of answer on the question about key personal trait was as follows (n = 1,090, V4 countries): 164 (15.0%) proactivity, 313 (28.7%) creativity, 322 (29.5%) flexibility, 144 (13.2%) innovativeness, 54 (5.0%) autonomy, 32 (2.9%) competitive aggressiveness, 40 (3.7%) risk aversion, 21 (2.0%) another personality trait.

The structure of responses (see Table 1) from SME owners and managers to the question of key personality traits of an entrepreneur, based on the country in which they conduct their business.

The results (see Table 1) reveal several common as well as different findings. More than 85% of respondents in each country indicated that the four most important personality traits of an entrepreneur are: proactivity, creativity, flexibility, and innovativeness. In the case of Polish SMEs, the most important personality trait of an entrepreneur is creativity (PL: 116; 38.5%). On the other hand, in the Czech Republic, Slovak Republic, and Hungary, it is the entrepreneur's flexibility (CR: 119; 32.9%; SR: 59; 36.4%; HU: 91; 34.3%). Chi-square test results are as follows: chi-square statistic = 71.349; p-value < 0.001. These results confirmed that there are the statistically significant differences of perception of key personality

traits between countries in V4 region. The factor of country of doing business is significant. The statistical hypothesis 1 was confirmed.

The results of comparison between country of doing business in perception of key personality traits (proactivity, creativity, flexibility) are presents in table 2.

The results (see Table 2) show that there are statistically significant differences in the perception of proactivity, activity, and flexibility as key personality traits among the V4 countries. Almost 40% (precisely 38.5%) of Polish SMEs consider creativity to be a key trait, which is statistically significantly higher compared to the other V4 countries (CR: 21.8%; SR: 25.3%; HU: 29.1%). Differences also exist in the perception of proactivity as a key trait. Every 5th respondent from Poland and the Czech Republic considers this trait to be key, whereas only every 15th respondent from Hungary and Slovakia does so.

### Comparison between business sectors

The results (see Table 2) show that there are statistically significant differences in the perception of proactivity, activity, and flexibility as key personality traits among the V4 countries. Almost 40% (precisely 38.5%) of Polish SMEs consider creativity to be a key trait, which is statistically significantly higher compared to the other V4 countries (CR: 21.8%; SR: 25.3%; HU: 29.1%). Differences

Table 1: Key personality trait according to the country in V4 region

PT	VISEGRAD GROUP COUNTRIES							
	Poland		Czech republic		Slovak republic		Hungary	
1	63	20.9%	71	19.6%	10	6.2%	20	7.5%
2	116	38.5%	79	21.8%	41	25.3%	77	29.1%
3	53	17.6%	119	32.9%	59	36.4%	91	34.3%
4	37	12.3%	44	12.2%	25	15.4%	38	14.3%
5	16	5.3%	13	3.6%	12	7.4%	13	4.9%
6	6	2.0%	12	3.3%	6	3.7%	8	3.0%
7	8	2.7%	8	2.2%	6	3.7%	18	6.8%
8	2	0.7%	16	4.4%	3	1.9%	0	0.0%
<b>Sum</b>	<b>301</b>	<b>100.0%</b>	<b>362</b>	<b>100.0%</b>	<b>162</b>	<b>100.0%</b>	<b>265</b>	<b>100.0%</b>

Note: PT – personality trait; 1 – proactivity; 2 – creativity; 3 – flexibility; 4 – innovativeness; 5 – autonomy; 6 – competitive aggressiveness; 7 – risk aversion; 8 – another personality trait.

Source: own research

Table 2: Differences of key personality trait in V4 countries

PT	VISEGRAD GROUP COUNTRIES					
	PL/CR		PL/SR		PL/HU	
Comparison	z-value	p-value	z-value	p-value	z-value	p-value
1	0.420	0.675	4.156	< 0.001	4.491	< 0.001
2	4.703	< 0.001	2.868	0.004	2.375	0.018
3	-4.465	< 0.001	0.448	0.653	-4.561	< 0.001
Comparison	HU/SR		HU/CR		CR/SR	
	z-value	p-value	z-value	p-value	z-value	p-value
1	0.539	0.589	-4.237	< 0.001	3.933	< 0.001
2	0.840	0.401	2.070	0.038	-0.878	0.379
3	-0.437	0.660	0.384	0.704	-0.792	0.430

Note: PT – personality trait; 1 – proactivity; 2 – creativity; 3 – flexibility.

Source: own research.

also exist in the perception of proactivity as a key trait. Every 5th respondent from Poland and the Czech Republic considers this trait to be key, whereas only every 15th respondent from Hungary and Slovakia does so.

The results (see Table 3) indicate that the most important personality trait, according to SMEs in the manufacturing (29.8%), transportation (36.7%), and services (28.9%) sectors, is creativity. On the other hand, SMEs operating in the retailing (28.9%), construction (38.8%), agriculture (32.4%), and tourism (36.8%) sectors indicated that flexibility is the most important trait. Chi-square test results are as follows: chi-square statistic = 29.471; p-value = 0.034. These results confirmed that there are the statistically significant differences of perception of key personality traits between business sectors. The factor of business sector is significant. The statistical hypothesis 2 was confirmed.

The results of comparison between type of business sector in perception of key personality traits (proactivity, creativity, flexibility) are presents in table 4.

The results (see Table 4) of the pairwise comparison between selected business sectors can be summarized as follows: (i) there are significant differences in the per-

ception of proactivity between SMEs operating in the services and construction sectors (p-value = 0.031); (ii) there are significant differences in the perception of flexibility between SMEs operating in the construction sector and those in manufacturing, services, and trade (M: p-value = 0.012; S: p-value = 0.034; R: p-value = 0.048); (iii) there are no significant differences in the perception of creativity among the selected business sectors (M, R, C, S).

**Business sector – Service**

Structure of answer on the question about key personal trait in the sector “service” was as follows (n = 339): 61 (18.0%) proactivity, 98 (28.9%) creativity, 98 (28.9%) flexibility, 39 (11.5%) innovativeness, 13 (3.8%) autonomy, 9 (2.7%) competitive aggressiveness, 12 (3.5%) risk aversion, 9 (2.7%) another personality trait.

The structure of responses (see Table 5) from SME owners and managers to the question of key personality traits of an entrepreneur according to the business sector – service.

Polish (40.6%) respondents operating in the services sector stated that the most significant entrepreneurial

Table 3: Key personality trait according to the business sector service

PT	Type of the business sector															
	M		R		C		Tr		A		To		S		AA	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	22	14.6	30	12.8	14	10.1	9	15.0	10	29.4	7	8.0	61	18.0	11	24.4
2	45	29.8	58	24.7	40	28.8	22	36.7	6	17.6	29	33.3	98	28.9	15	33.3
3	38	25.2	68	28.9	54	38.8	12	20.0	11	32.4	32	36.8	98	28.9	9	20.0
4	22	14.6	41	17.4	16	11.5	7	11.7	3	8.8	11	12.6	39	11.5	5	11.1
5	4	2.6	14	6.0	5	3.6	6	10.0	3	8.8	6	6.9	13	3.8	3	6.7
6	6	4.0	5	2.1	5	3.6	2	3.3	1	2.9	2	2.3	9	2.7	2	4.4
7	11	7.3	12	5.1	3	2.2	2	3.3	0	0.0	0	0.0	12	3.5	0	0.0
8	3	2.0	7	3.0	2	1.4	0	0.0	0	0.0	0	0.0	9	2.7	0	0.0
<b>Sum</b>	<b>151</b>	<b>100</b>	<b>235</b>	<b>100</b>	<b>139</b>	<b>100</b>	<b>60</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>87</b>	<b>100</b>	<b>339</b>	<b>100</b>	<b>45</b>	<b>100</b>

Note: PT – personality trait; 1 – proactivity; 2 – creativity; 3 – flexibility; 4 – innovativeness; 5 – autonomy; 6 – competitive aggressiveness; 7 – risk aversion; 8 – another personality trait; M – Manufacturing; R – Retailing; C – Construction; Tr – Transportation; A – Agriculture; To – Tourism; S – Service; AA – Another area. Source: own research.

Table 4: Differences of key personality trait in selected business sector

PT	TYPE OF BUSINESS SECTORS						
	M/R		M/C		M/S		
	Comparison	z-value	p-value	z-value	p-value	p-value	
1		0.506	0.610	1.160	0.246	-0.933	0.352
2		1.100	0.267	0.191	0.849	0.207	0.841
3		-0.810	0.418	-2.501	0.012	-0.854	0.395
PT	R/C		R/S		S/C		
	Comparison	z-value	p-value	z-value	p-value	p-value	
	1	0.781	0.435	-1.686	0.091	2.162	0.031
2	-1.840	0.066	-1.120	0.263	0.029	0.976	
3	-1.976	0.048	0.007	0.992	-2.119	0.034	

Note: PT – personality trait; 1 – proactivity; 2 – creativity; 3 – flexibility. M – Manufacturing; R – Retailing; C – Construction; S – services Source: own research.

Table 5: Key personality trait according to the business sector service

PT	VISEGRAD GROUP COUNTRIES							
	Poland		Czech republic		Slovak republic		Hungary	
1	27	26.7%	27	20.1%	3	4.4%	4	11.1%
2	41	40.6%	32	23.9%	14	20.6%	11	30.6%
3	16	15.8%	39	29.1%	28	41.2%	15	41.7%
4	12	11.9%	17	12.7%	9	13.2%	1	2.8%
5	1	1.0%	6	4.5%	5	7.4%	1	2.8%
6	1	1.0%	6	4.5%	1	1.5%	1	2.8%
7	1	1.0%	2	1.5%	6	8.8%	3	8.3%
8	2	2.0%	5	3.7%	2	2.9%	0	0.0%
<b>Sum</b>	<b>101</b>	<b>100.0%</b>	<b>134</b>	<b>100.0%</b>	<b>68</b>	<b>100.0%</b>	<b>36</b>	<b>100.0%</b>

Note: PT – personality trait; 1 – proactivity; 2 – creativity; 3 – flexibility; 4 – innovativeness; 5 – autonomy; 6 – competitive aggressiveness; 7 – risk aversion; 8 – another personality trait. Source: own research

Table 6: Differences of key personality trait in V4 countries of service SME segment

PT	VISEGRAD GROUP COUNTRIES					
	PL/CR		PL/SR		PL/HU	
Comparison	z-value	p-value	z-value	p-value	z-value	p-value
1	1.188	0.234	3.724	<0.001	1.923	0.054
2	2.741	0.006	2.722	0.006	1.066	0.284
3	-2.377	0.017	-3.681	<0.001	-3.180	0.001
Comparison	HU/SR		HU/CR		CR/SR	
	z-value	p-value	z-value	p-value	z-value	p-value
1	1.297	0.194	-1.247	0.211	2.972	0.003
2	1.131	0.258	0.818	0.412	0.527	0.596
3	0.048	0.960	1.437	0.150	1.069	0.285

Note: PT – personality trait; 1 – proactivity; 2 – creativity; 3 – flexibility.

Source: own research.

Table 7: Key personality trait according to the business sector retailing

PT	VISEGRAD GROUP COUNTRIES							
	Poland		Czech republic		Slovak republic		Hungary	
1	8	16.3%	11	14.5%	4	10.3%	7	9.9%
2	15	30.6%	14	18.4%	12	30.8%	17	23.9%
3	13	26.5%	24	31.6%	8	20.5%	23	32.4%
4	5	10.2%	14	18.4%	10	25.6%	12	16.9%
5	6	12.2%	3	3.9%	4	10.3%	1	1.4%
6	0	0.0%	1	1.3%	1	2.6%	3	4.2%
7	2	4.1%	2	2.6%	0	0.0%	8	11.3%
8	0	0.0%	7	9.2%	0	0.0%	0	0.0%
<b>Sum</b>	<b>49</b>	<b>100.0%</b>	<b>76</b>	<b>100.0%</b>	<b>39</b>	<b>100.0%</b>	<b>71</b>	<b>100.0%</b>

Note: PT – personality trait; 1 – proactivity; 2 – creativity; 3 – flexibility; 4 – innovativeness; 5 – autonomy; 6 – competitive aggressiveness; 7 – risk aversion; 8 – another personality trait. Source: own research

trait is creativity. Hungarian (41.7%), Czech (29.1%) and Slovak (41.2%) respondents operating in the services sector indicated that the most significant entrepreneurial trait is flexibility. In the services sector, there is statistically significant differences in attitudes toward key personality trait among the V4 countries (Chi-square test = 30.367; p-value = 0.004). The country of business operation influences the perception of key entrepreneurial traits in the services sector. These findings are also con-

firmed by the subsequent pairwise comparison between the countries (see table 6).

The findings (see Table 6) obtained from the comparison between countries in the services sector are as follows: (i) there are significant differences between Slovak and Polish respondents in the perception of proactivity, flexibility, and creativity as key entrepreneurial traits; (ii) there are no significant differences between Czech and Hungarian respondents in the perception of proactivity, flexi-

Table 6: Differences of key personality trait in V4 countries of retailing SME segment

PT	VISEGRAD GROUP COUNTRIES					
	PL/CR		PL/SR		PL/HU	
Comparison	z-value	p-value	z-value	p-value	z-value	p-value
1	0.282	0.779	0.824	0.412	1.053	0.294
2	1.576	0.114	-0.016	0.984	0.812	0.418
3	-0.604	0.549	0.658	0.509	-0.689	0.490
Comparison	HU/SR		HU/CR		CR/SR	
	z-value	p-value	z-value	p-value	z-value	p-value
1	-0.853	0.395	-0.066	0.944	0.636	0.522
2	0.820	0.412	-0.777	0.435	-1.500	0.133
3	0.106	0.912	1.325	0.183	1.254	0.211

Note: PT – personality trait; 1 – proactivity; 2 – creativity; 3 – flexibility.

Source: own research.

bility, and creativity as key entrepreneurial traits; (iii) there are no significant differences between Slovak and Hungarian respondents in the perception of proactivity, flexibility, and creativity as key entrepreneurial traits. The country of business has a significant influence on the perception of the key personality trait of an entrepreneur in the services sector. Hypothesis H3a was confirmed.

#### Business sector - Retailing

Structure of answer on the question about key personal trait in the sector “retailing” was as follows (n = 235): 30 (12.8%) proactivity, 58 (24.7%) creativity, 68 (28.9%) flexibility, 41 (17.4%) innovativeness, 14 (6.0%) autonomy, 5 (2.1%) competitive aggressiveness, 12 (5.1%) risk aversion, 7 (3.0%) another personality trait.

The structure of responses (see Table 7) from SME owners and managers to the question of key personality traits of an entrepreneur according to the business sector – retailing.

Polish (30.6%) and Czech (30.8%) respondents operating in the retailing stated that the most significant entrepreneurial trait is creativity. Hungarian (32.4%) and Czech (31.6%) respondents indicated that the most significant entrepreneurial trait is flexibility. In this business sector, there is no statistically significant differences in attitudes toward key personality trait among the V4 countries (Chi-square test = 8.231; p-value = 0.511). The country of business operation influences the perception of key entrepreneurial traits in the retailing sector.

The results of comparison between country of doing business in perception of key personality traits (proactivity, creativity, flexibility) in the retailing SME segment are presents in table 8.

The findings (see Table 8) obtained from the comparison between countries in the retailing sector are no significant differences between: (i) Czech and Hungarian respondents; (ii) Czech and Slovak respondents; (iii) Czech and Polish respondents; (iv) Hungarian and Slovak respondents; (v) Hungarian and Polish respondents; (vi) Polish and Slovak respondents; in the perception of proactivity, flexibility, and creativity as key entrepreneurial traits. The country of business has not significant influence on the perception of the key personality trait of an

entrepreneur in the retailing sector. Hypothesis H3b was rejected.

#### DISCUSSION

The empirical results of the evaluation of the key personality traits of entrepreneurs in the business environment of the SME segment in V4 countries (CR, PL, HU, SR) reveal the following findings:

Creativity, proactivity, and flexibility of an entrepreneur are perceived as the three most important traits regardless of the country of business or business sector.

These results are directly in line with the partial findings of several authors: Kozubíková et al. (2017); Janowski & Szczepańska-Przekota (2022) or Tisu, & Virgá (2022).

There are significant differences in the attitudes of owners and managers toward the most important entrepreneurial trait depending on the country of business. There are significant differences in the attitudes of owners and managers toward the most important entrepreneurial trait depending on the business sector. In the services sector, there are significant differences in the perception of the most important entrepreneurial trait among the V4 countries. In the retail sector, there are no significant differences in the perception of the most important entrepreneurial trait among the V4 countries. Sualet Khattak et al. (2024) found that cultural, racial, and linguistic characteristics of the entrepreneur, as well as the country of business, determine attitudes towards key personality traits. The authors' conclusions in this regard support the findings of this article.

According to the latest studies Leonelli et al. (2022) or Estrada-Lavilla et al. (2024), significant differences have been confirmed in the attitudes of business owners and managers toward the most important entrepreneurial traits, with these differences depending on the country of business. This suggests that cultural and economic factors in individual countries may influence which traits are considered key for successful entrepreneurship.

Additionally, differences in opinions were also found based on the business sector. In the services sector, perceptions of the most important entrepreneurial trait significantly differ among the Visegrad Four (V4) countries

(Kozubíková et al., 2018). This may point to various needs and challenges faced by entrepreneurs in each country of this region.

On the other hand, no significant differences in these attitudes were observed in the retail sector among the V4 countries. Retail thus appears to be an area where entrepreneurs and managers perceive key entrepreneurial traits in a similar way, regardless of geographical differences (Sarwoko & Nurfarida, 2021).

## CONCLUSION

The aim of the article was to verify and quantify the effect of the country of business and the business sector on the perception of the key personality traits of an entrepreneur.

The three most important personality traits of an entrepreneur are proactivity, flexibility, and creativity. Among the significant findings is the knowledge that the country of business and the business sector are important factors that determine the attitudes of business owners and managers toward the key personality traits of an entrepreneur operating in the SME business environment. In the services sector, there are significant differences in the

perception of these three key personality traits among the V4 countries. On the other hand, in the retail sector, the country of business did not prove to be a significant factor.

The quantitative research was conducted in four Central European countries. The empirical findings are based on the truthful and subjective attitudes of small and medium-sized enterprise owners and managers. The statistical hypotheses were verified using one statistical approach – the Chi-square test and the Z Score Calculator for 2 Population Proportions.

The authors of the research have the ambition in future research activities to verify the influence of the country and business sector on the perception of sustainability factors in the business environment, such as the presence of crisis phenomena, financial management, corporate social responsibility, and the level of digitalization, among SME owners and managers. Another ambition is to conduct similar research and verify the obtained findings with a different sample of respondents.

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## REFERENCES

1. Amin, M. B., Asaduzzaman, M., Debnath, G. C., Rahaman, M. A., & Oláh, J. (2024). Effects of circular economy practices on sustainable firm performance of green garments. *Oeconomia Copernicana*, 15(2), 637-682. <https://doi.org/10.24136/oc.2795>
2. Abdul, M., Rahman, A. A., Yahya, M., & Rahman, M. M. (2019). Entrepreneurial characteristics and intentions among undergraduates in Malaysia. *World Review of Entrepreneurship, Management and Sustainable Development*, 15 (5), 560-574. <https://dx.doi.org/10.1504/WREMSD.2019.103532>
3. Adams, M., & Jiang, W. (2017). Do Chief Executives' Traits Affect the Financial Performance of Risk-trading Firms? Evidence from the UK Insurance Industry. *British Journal of Management*, 28 (3), 481-501. <https://dx.doi.org/10.1111/1467-8551.12222>
4. Altınay, L., Kromidha, E., Nurmagambetova, A., Alrawadieh, Z., & Madanoglu, G.K. (2022). A social cognition perspective on entrepreneurial personality traits and intentions to start a business: does creativity matter? *Management Decision*, 60 (6), 1606-1625. <https://doi.org/10.1108/MD-12-2020-1592>
5. Antončič, B., & Auer Antončič, J. (2023). Psychological and sociological determinants of entrepreneurial intentions and behaviors. *Frontiers in Psychology*, 14, 1076768. <https://dx.doi.org/10.3389/fpsyg.2023.1076768>
6. Anwar, M., & Clauß, T. (2021). Personality traits and bricolage as drivers of sustainable social responsibility in family SMEs: A COVID-19 perspective. *Business and Society Review*, 126 (1), 37-68. <https://dx.doi.org/10.1111/basr.12222>
7. Amin, M. B., & Oláh, J. (2024). Effects of green HRM practices on circular economy-based performance of banking organizations in an emerging nation. *Banks and Bank Systems*, 19 (2), 75-87. [http://dx.doi.org/10.21511/bbs.19\(2\).2024.06](http://dx.doi.org/10.21511/bbs.19(2).2024.06)
8. Bag, S., & Omrane, A. (2021). The relationship between the personality traits of entrepreneurs and their decision-making process: The role of manufacturing smes' institutional environment in India. *Forum Scientiae Oeconomia*, 9 (3), 103-122. [https://dx.doi.org/10.23762/FSO\\_VOL9\\_NO3\\_7](https://dx.doi.org/10.23762/FSO_VOL9_NO3_7)



9. Barber, D., Peake, W.O., & Harris, M.L. (2024). Can playing defense yield gains? Examining the relationships among regulatory focus, innovation, and SME performance. *Journal of Small Business Management*, 62 (3), 1469-1497. <https://dx.doi.org/10.1080/00472778.2022.2141762>
10. Dvorský, J., Švihlíková, I., Kozubíková, L., Frajtova Michalíková, K., & Balcerzak, A. P. (2023). Effect of CSR implementation and crisis events in business on the financial management of SMEs. *Technological and Economic Development of Economy*, 29(5), 1496-1519. <https://doi.org/10.3846/tede.2023.19821>
11. Dvorsky, J., Petrakova, Z., Hudakova, M. & Bednarz, J. (2023). National support and legislative change in the business environment of V4 countries: Business sectors view. *Journal of Business Sectors*, 1 (1), 42-52. <https://doi.org/10.62222/EQDP3972>
12. Estrada-Lavilla, R., Ovalle-Zuleta, M. A., Ruiz-Navarro, J., & Camelo-Ordaz, M. D. E. L. C. (2024). Development of a cross-cultural item bank for measuring entrepreneurial personality traits associated with venture success. *Journal of Developmental Entrepreneurship*, 29 (1), 2450006. <https://dx.doi.org/10.1142/S1084946724500067>
13. Franco, M., & Prata, M. (2019). Influence of the individual characteristics and personality traits of the founder on the performance of family SMEs. *European Journal of International Management*, 13 (1), 41-68. <https://dx.doi.org/10.1504/EJIM.2019.096498>
14. Chouchane, R., & St-Jean, É. (2024). The nexus between intrapreneurship and person-job fit: a qualitative comparative analysis of work motivation in SMEs. *Journal of Organizational Effectiveness*. <https://dx.doi.org/10.1108/JOE-PP-09-2023-0390>
15. Cohen, A., Bitan, D., & Mikulincer, A. (2023). The Influence of Managers' Personality on Innovation Deployment: Evidence from Small Business. *Journal of Management World*, (4), 76-86.
16. Hosain, M. S., Amin, M. B., Imam, H., Rahaman, M. A., & Oláh, J. (2024). The spillover effect of a part-time job experience on the performance of subsequent full-time job: Empirical evidence from Hungary. *Social Sciences & Humanities Open*, 10, 101023. <https://doi.org/10.1016/j.ssaho.2024.101023>
17. Janowski, A., & Szczepańska-Przekota, A. (2022). The Trait of Extraversion as an Energy-Based Determinant of Entrepreneur's Success—The Case of Poland. *Energies*, 15 (13), 4533. <https://dx.doi.org/10.3390/en15134533>
18. Jovanović, I., Arsić, M., & Nikolić, D. (2018). Entrepreneurial personality traits and smes profitability in transition economy. *Serbian Journal of Management*, 13 (1), 89-104. <https://dx.doi.org/10.5937/sjm13-13087>
19. Kickul J., & Gundry, L. (2002) Prospecting for strategic advantage: the proactive entrepreneurial personality and small firm innovation. *Journal of Small Business Management*, 40 (2), 85-97. <https://doi.org/10.1111/1540-627X.00042>
20. Khosla, A., & Gupta, P. (2017). Traits of successful entrepreneurs. *Journal of Private Equity*, 20 (3), 12-15. <https://dx.doi.org/10.3905/jpe.2017.20.3.012>
21. Kozubíková, L., Čepel, M., & Zlámálová, M. (2018). Attitude towards innovativeness based on personality traits in the SME sector. Czech Republic case study. *Management and Marketing*, 13 (2), 913-928. <https://dx.doi.org/10.2478/mmcks-2018-0013>
22. Kozubíková, L., Sopková, G., Krajčík, V., & Tyll, L. (2017). Differences in innovativeness, proactiveness and competitive aggressiveness in relation to entrepreneurial motives. *Journal of International Studies*, 10 (4), 207-218. <https://dx.doi.org/10.14254/2071-8330.2017/10-4/16>
23. Kozubíková, L., Belas, J., Bilan, Y., & Bartoš, P. (2015). Personal characteristics of entrepreneurs in the context of perception and management of business risk in the SME segment. *Economics and Sociology*, 8 (1), 41-54. <https://dx.doi.org/10.14254/2071-789X.2015/8-1/>
24. Leonelli, S., Masciarelli, F., & Fontana, F. (2022). The impact of personality traits and abilities on entrepreneurial orientation in SMEs. *Journal of Small Business and Entrepreneurship*, 34 (3), 269-294. <https://dx.doi.org/10.1080/08276331.2019.1666339>
25. Marconatto, D. A. B., Teixeira, E. G., Santini, F. O., & Ladeira, W. J. (2022). Characteristics of owners and managers in different countries: a meta-analytical investigation of SMEs' growth. *Journal of Small Business and Enterprise Development*, 29 (3), 354-379. <https://dx.doi.org/10.1108/JSBED-11-2020-0411>
26. Munir, H., Jianfeng, C., & Ramzan, S. (2019) Personality traits and theory of planned behavior comparison of entrepreneurial intentions between an emerging economy and a developing country. *International Journal of Entrepreneurial Behavior & Research*, 25 (3), 554-580. <https://doi.org/10.1108/IJEBR-05-2018-0336>
27. Popp, J., Kiss, A., Oláh, J., Máté, D., Bai, A., & Lakner, Z. (2018). Network analysis for the improvement of food safety in the international honey trade. *Amfiteatru Economic*, 20(47), 84-98. [http://dx.doi.org/10.21511/bbs.19\(2\).2024.06](http://dx.doi.org/10.21511/bbs.19(2).2024.06)
28. Puerta Gómez, J. R., Aceituno-Aceituno, P., Burgos García, C., & González-Ortiz-de-Zárate, A. (2024). The Role of Higher Education in Shaping Essential Personality Traits for Achieving Success in Entrepreneurship in Spain. *Behavioral Sciences*, 14 (3), 151. <https://dx.doi.org/10.3390/bs14030151>
29. Sanda, M. A. (2024). Human factors in creative entrepreneurship: Significance of entrepreneurs' personal characteristics, perceived status, and emotions. *Journal of the International Council for Small Business*, 5 (1), 25-36. <https://dx.doi.org/10.1080/26437015.2023.2275605>

30. Sarwoko, E., & Nurfarida, I. N. (2021). Entrepreneurial marketing: Between entrepreneurial personality traits and business performance. *Entrepreneurial Business and Economics Review*, 9 (2), 105-118. <https://dx.doi.org/10.15678/EBER.2021.090207>
31. Sualet Khattak, M., Wu, Q., Ahmad, M., & Ullah, R. (2024). The role of managerial competencies in managing resources for sustainable development strategy in SMEs. *Social Responsibility Journal*, 20 (7), 1317-1344. <https://dx.doi.org/10.1108/SRJ-11-2023-0634>
32. Tamim, M., Wang, G., Gai, X., & Ma, Y. (2024). Big five personality traits and spontaneous mental contrasting among Chinese students. *Current Psychology*, 43 (17), 15459-15470. <https://dx.doi.org/10.1007/s12144-023-05487-z>
33. Tisu, L., & Vîrgă, D. (2022). Proactive Vitality Management, Work–Home Enrichment, and Performance: A Two-Wave Cross-Lagged Study on Entrepreneurs. *Frontiers in Psychology*, 13, 761958. <https://dx.doi.org/10.3389/fpsyg.2022.761958>
34. Thai, Q. H., & Mai, K. N. (2023). Entrepreneurial traits: a systematic literature review. *Management Review Quarterly*. <https://dx.doi.org/10.1007/s11301-023-00370-4>
35. Zheng, X., Zhou, Y., & Iqbal, S. (2022). Working capital management of SMEs in COVID-19: role of managerial personality traits and overconfidence behavior. *Economic Analysis and Policy*, 76, 439-451. <https://dx.doi.org/10.1016/j.eap.2022.08.006>