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The differences in the impact of entrepreneurship education on entrepreneurial knowledge: a cross-country analysis

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Abstract. *Nowadays, entrepreneurial knowledge is assessed as having a significant role in supporting and promoting entrepreneurs in the process of starting and running businesses. In addition, the issue of effective entrepreneurship orientation, promotion, and support has become one of the significant tasks of education systems in many countries over the years. Therefore, developing the characteristics, capabilities, and knowledge of entrepreneurs is an essential part of the development policy of each country. A country with good education and adequate entrepreneurial knowledge will contribute to improving the knowledge of entrepreneurs. Furthermore, it will help solve the difficulties and risks facing entrepreneurs. This paper will research and analyze the differences in the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs. This entrepreneurial knowledge is necessary and significant for each entrepreneur. The countries considered for this study are Eastern European countries, including Poland, Bulgaria, Croatia, Latvia, and the Slovak Republic. The study was carried out based on data collected from the global survey provided by the Global Entrepreneurship Monitor – National Expert Survey – Individual-Level Data in 2017. The research results show that there is some difference in the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs. In the case of the five studied countries, the level of education, human development, and national development cannot adequately explain the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs. The reasons are the difference in awareness, operating environment, and the need for entrepreneurs to have entrepreneurial knowledge. The results obtained contribute to promoting research on the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs.*

Keywords: Entrepreneurship Education, Entrepreneurship Knowledge, Eastern European, Country Comparison, Global Entrepreneurship Monitor.

Please cite the article as follows: Doan, K. H. (2022), "The differences in the impact of entrepreneurship education on entrepreneurial knowledge: a cross-country analysis", *Management & Marketing. Challenges for the Knowledge Society*, Vol. 17, No. 1, pp. 73-97. DOI: 10.2478/mmcks-2022-0005.

Introduction

Currently, enterprises and entrepreneurs are objects of interest in countries because of their role in the economic growth of each country. Enterprises and entrepreneurs are the main forces driving the development of the economy and are the engines of innovation (Singer et al., 2015). Therefore, if there is a favorable business environment, more and more enterprises will be established. However, there are many risk factors and challenges that affect the

entrepreneurial intention of entrepreneurs, as well as the impact on the business performance of enterprises (Păunescu et al., 2018; Doh et al., 2019; Hoogendoorn et al., 2019; Priede-Bergamini et al., 2019; Păunescu and Molnar, 2020). To respond to risks and challenges, and changes in the business environment, enterprises and entrepreneurs need to have appropriate ways and strategies to cope with these changes. It will help businesses survive and grow. More specifically, Mas-Tur and Soriano (2014) and Tu et al. (2014) determined that entrepreneurs have a decisive role in improving enterprises.

Nowadays, there are many factors that affect entrepreneurs. It includes both internal and external aspects of entrepreneurs. These factors affect the behavior and characteristics of entrepreneurs (Ozaralli and Rivenburgh, 2016; Păunescu and Molnar, 2020). Among the factors that affect entrepreneurs, entrepreneurial knowledge plays an essential role in promoting the entrepreneurial intentions of entrepreneurs, helping to support and improve business operations (Barba-Sánchez and Atienza-Sahuquillo, 2018; Jena, 2020). Furthermore, entrepreneurship education and the national education system have a significant contribution to the formation and development of entrepreneurial knowledge of entrepreneurs (Karyaningsih, 2020). Today, many researchers are identifying many positive effects of entrepreneurship on transforming the economic structure, the labor structure, and improving economic competitiveness (Jena, 2020). Therefore, the issue of efficient orientation, promotion, and support for entrepreneurship has become one of the significant tasks of education systems in many countries over the years (Jena, 2020). Entrepreneurial intentions, operations, and business development are inseparable from entrepreneurial knowledge (Barba-Sánchez and Atienza-Sahuquillo, 2018; Jena, 2020). Therefore, countries that want to develop entrepreneurship and enterprises must focus on entrepreneurship education.

Therefore, it is interesting to consider the role and influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs. Furthermore, this entrepreneurial knowledge is important for every entrepreneur and for the entrepreneurial activity of entrepreneurs. Thus, countries should specifically look at the influence of entrepreneurship education on entrepreneurial knowledge. From there, it can make the right choices of educational development models, support their country's entrepreneurial knowledge, improve the awareness of entrepreneurs, promote and contribute to the survival and growth of entrepreneurship. However, there are still questions about how other relevant factors affect entrepreneurship education (such as economic development, human development in each country, or differences in the influence of entrepreneurship education on entrepreneurial knowledge between countries).

This article will present a brief summary of the relationship and influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs. It includes the entrepreneurial knowledge of entrepreneurs regarding the business environment, the entrepreneurial knowledge of entrepreneurs regarding starting and running a business, and the entrepreneurial knowledge of entrepreneurs regarding creativity and innovation of entrepreneurs. In addition, an overview of the identification of influencing factors and issues related to entrepreneurship education and entrepreneurial knowledge of entrepreneurs is also provided.

The study then conducted a specific assessment of the differences in the influence of entrepreneurship education on entrepreneurial knowledge across countries in Eastern Europe to provide concrete evidence of this relationship. These countries are Poland,

Bulgaria, Croatia, Latvia, and the Slovak Republic. In addition, these countries have high levels of human development and are quite similar to each other. Therefore, it is also meaningful to assess the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs in these countries. The research question here is whether there is a difference in the assessment of the influence of entrepreneurship education on the entrepreneurial knowledge in these countries, and to what extent is the difference?

In this study, the data collected are based on the global survey on entrepreneurship of the Global Entrepreneurship Monitor (GEM) – National Expert Survey – Individual-Level Data in 2017. Specific analyzes will be carried out to assess differences in the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs among Eastern European countries. Finally, conclusions and suggestions are also provided to improve research activities on the impact of entrepreneurship education on entrepreneurial knowledge of entrepreneurs.

To achieve the purpose of the research, the paper is divided into the following sections: the first part introduces a brief literature review of the research related to the topic of the article; the second part provides the research methods used in this paper; the third part presents the research results obtained after analyzing and processing the collected data, and the last part is the conclusion and discussion of the research results of the article.

Literature review

Entrepreneurial knowledge of entrepreneurs

Entrepreneurial characteristics and capabilities play an essential role in starting and running a business. Several studies show that there is an indispensable relationship between the characteristics and competencies of entrepreneurs with business performance and business success (Al Mamun and Fazal, 2018; Hastuti, 2020; Machmud and Hidayat, 2020). Therefore, entrepreneurs must pay special attention to improving their capacity to promote their business performance and capacity.

According to Mojab et al. (2011), competencies are classified into knowledge, characteristics, and skills. In addition, research by Driessen and Zwart (2007) has also identified four types of entrepreneurial competencies, each of which includes a group of features: knowledge, motivation, competence (management, organizational planning, etc.), and characteristics (risk tolerance, association, etc.). Uzunidis et al. (2014) stated that the resources entrepreneurs need to stand out can be grouped into three main categories: (1) knowledge through education and professional experience; (2) financing through savings, loans, or grants; and (3) relationships through networks, family relationships, and personal relationships. In addition, Dowling (2003) and Zimmerer and Scarborough (2003) argued that the reason behind business failure mainly comes from a lack of entrepreneurial skills and knowledge. In more detail, entrepreneurial knowledge is identified as having a significant role in the characteristics and capabilities of entrepreneurs.

Jack and Anderson (1999) defined entrepreneurial knowledge as the concepts, skills, and intelligence that entrepreneurs use or should use. This definition implies several things. First, entrepreneurial knowledge is seen as a means to an end (Jack and Anderson, 1999). Second, although skill may seem different from knowledge, the two are closely related. The application of skills is always context-dependent and influenced by collective and individual knowledge relevant to a situation (Jack and Anderson, 1999). Furthermore, skill training always has knowledge content (Jack and Anderson, 1999).

Regarding the role of entrepreneurial knowledge of entrepreneurs, the researchers determined that individuals with entrepreneurial knowledge are likely to become entrepreneurs. The reason is that entrepreneurial knowledge affects entrepreneurial readiness (Ni and Ye, 2018), affects entrepreneurship and new business development (Tung et al., 2020), affects the ability of potential entrepreneurs in recognizing opportunities and pursuing them (Shane, 2000), influence can understand and apply information about business activities (Johannisson, 1991; Shane, 2000), etc. Moreover, many studies have confirmed that entrepreneurial knowledge enhances one's entrepreneurial intention (Roxas et al., 2008). More specifically, entrepreneurial knowledge affects perceived desirability, perceived social norms, and entrepreneurial self-efficacy (Roxas et al., 2008). Gained entrepreneurial knowledge will enhance an individual's perception of an individual's desired capabilities, entrepreneurial performance, and social norms for entrepreneurship (Roxas et al., 2008).

Previous studies on entrepreneurial knowledge tend to converge on two types of knowledge: functional-oriented knowledge and strategic management-oriented knowledge (Agrawal, 2005; Widding, 2005). Functional-oriented knowledge includes sales, marketing, production, human resource management, and financial management (Widding, 2005). Oriented knowledge of strategic management contains strategy and competitive analysis, growth management, exploration, and exploitation of opportunities, and assessment of the business environment (Agrawal, 2005). Although they can be classified differently, access to knowledge and knowledge is the most essential resource in entrepreneurship (Widding, 2005). Entrepreneurial knowledge is a key expression of human capital and is necessary for the success and sustainable development of enterprises (Wu et al., 2008). With this knowledge, a potential entrepreneur can understand, extrapolate, interpret, and apply new information in new ways. These are the core activities of entrepreneurship (Johannisson, 1991; Shane, 2000).

Entrepreneurship education and its impact on entrepreneurial knowledge

Among the factors affecting entrepreneurship that can be mentioned (such as policy, law, tax, technology, economic situation, income, age, social status, education, etc.), education is considered as one of the significant factors affecting business intention (Fayolle et al., 2006; Zhang et al., 2013). Grivokostopoulou et al. (2019) confirmed that an essential premise of entrepreneurship education is that it can be learned and that students can be taught to form entrepreneurial mentality, skills, and competencies. In detail, Drucker (1985) further determined that entrepreneurship is a discipline. So, it can be learned (Drucker, 1985). In short, entrepreneurship can be provided and communicated through learning and education.

Kuratko (2005) assessed that many aspects of entrepreneurship can be taught. In addition, Roxas et al. (2008) argued that it is what the participants have learned, not the program itself. So, it will determine the business intentions and business behavior of entrepreneurs. Therefore, it can lead to the formation of entrepreneurial and business initiatives (Grivokostopoulou et al., 2019). As a result, entrepreneurship education becomes a top priority on policy agendas globally as a means of promoting economic growth, combating unemployment, and creating social capital (Varadarajan Sowmya et al., 2010; Kerrin et al., 2017; Grivokostopoulou et al., 2019). In addition, entrepreneurship education is one of the fastest-growing subject areas with growing interest due to its ability to link current business practice with academic theory (Simović and Radović-Marković, 2018). More

specifically, entrepreneurship education is defined as the education and promotion of competencies, skills, and personal qualities such as innovation, creativity, and innovation for the young generation. From there, it helps learners to grasp opportunities in life and work. Furthermore, it will help them to work for themselves.

According to Augustine et al. (2018), entrepreneurship education was first taught at Harvard University in 1947. It became popular in business schools in the 1970s and began to gain the interest of academics worldwide. Since then, numerous stories about the great benefits of entrepreneurship, such as economic, social, and educational benefits, have led to an increase in educational programs and courses in entrepreneurship in institutions of higher education around the world (Fiet, 2001; Bulut and Sayin, 2010; Packham et al., 2010; Gerba, 2012; Păunescu and Molnar, 2020). In the United States, entrepreneurship education has exploded with more than 2,200 courses in more than 1,600 schools, colleges, and universities as of 2005 (Kuratko, 2005). Research by Kerrin et al. (2017) confirmed that even in emerging economies with poor education systems, courses in entrepreneurship increase the desire for entrepreneurship and entrepreneurial intentions. Furthermore, according to the studies of Heinonen and Poikkijoki (2006), entrepreneurship education programs need to include three significant goals: (1) teaching students to understand the field of entrepreneurship, (2) learning to act in ways businesses, and (3) eventually becoming successful entrepreneurs.

The aim of entrepreneurship education is to train people with qualities and capabilities such as innovation spirit, creative thinking, adventurous spirit, communication ability, knowledge of science and technology, business ethics, etc. to create enterprises. (Ibrahim and Soufani, 2002). As for the role of entrepreneurship education, Karyaningsih (2020) argued that entrepreneurship education impacts three factors: the entrepreneurial mindset, knowledge, and intention (Karyaningsih, 2020). Additionally, the role of entrepreneurship education is also shown to provide knowledge (Fellnhofer, 2018), business planning and building confidence, entrepreneurial motivation for students to start a business (Quality Assurance Agency, 2012), the identification of new business opportunities (Hussain and Norashidah, 2015), and improving entrepreneurial preparation (Coduras et al., 2016; Ruiz et al., 2016; Păunescu et al., 2018). Do Paço et al. (2015) assessed that entrepreneurship education has a role in promoting entrepreneurial intention. In addition, it further fosters entrepreneurial citizens by improving management knowledge and developing psychological attributes and behaviors related to entrepreneurship (Do Paço et al., 2015). Pajarinen et al. (2006) argued that evidence shows that entrepreneurs with higher education are more innovative, employ modern business models, and use new technology to do business.

More specifically, regarding entrepreneurial knowledge, education can serve as a preparatory act to start or launch a new venture (Jack and Anderson, 1999). From there, the transfer of knowledge and related skills is expected to increase entrepreneurial propensity and effectiveness (Jack and Anderson, 1999). Furthermore, these programs are considered the structural transmission of entrepreneurial knowledge to entrepreneurs (Young, 1997). Basu and Virick (2008) determined that educational programs tend to increase a person's level of confidence in business ownership. In addition, perceptions of formal learning (Zhao et al., 2005) and entrepreneurial knowledge (Park, 2005) have been shown to increase one's self-employment effectiveness. Grivokostopoulou et al. (2019) confirmed that various topics of entrepreneurship education courses have been designed and formulated to provide

students with the opportunity to acquire theoretical knowledge about entrepreneurship. Thus, individuals who have gained entrepreneurial knowledge from entrepreneurship education programs will know the inherent challenges associated with entrepreneurship (Fayolle, 2005).

Furthermore, many studies have shown that students require entrepreneurship education programs because of their immediate or long-term plans to set up their businesses. From entrepreneurship education, they can acquire knowledge and skills that will be useful for their careers (Jack and Anderson, 1999). Nabi et al. (2017) argued that this growing trend suggests that exposure to some types and levels of entrepreneurship education can benefit students in acquiring knowledge and skills. Besides, it will raise intentions toward entrepreneurship (Nabi et al., 2017). These educational programs facilitate the transfer of knowledge and develop relevant competencies. It will increase students' competence and effectiveness when engaging in business (Liñán et al., 2011). Therefore, it shows a growing demand for entrepreneurship education programs.

Therefore, through a review of the relevant literature, it can be said that a country's entrepreneurship education affects entrepreneurial knowledge. It includes entrepreneurial knowledge of entrepreneurs about the business environment, entrepreneurial knowledge of entrepreneurs regarding starting and running a business, and entrepreneurial knowledge of entrepreneurs regarding creativity and innovation. Figure 1 visually shows a model of the impact of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs.

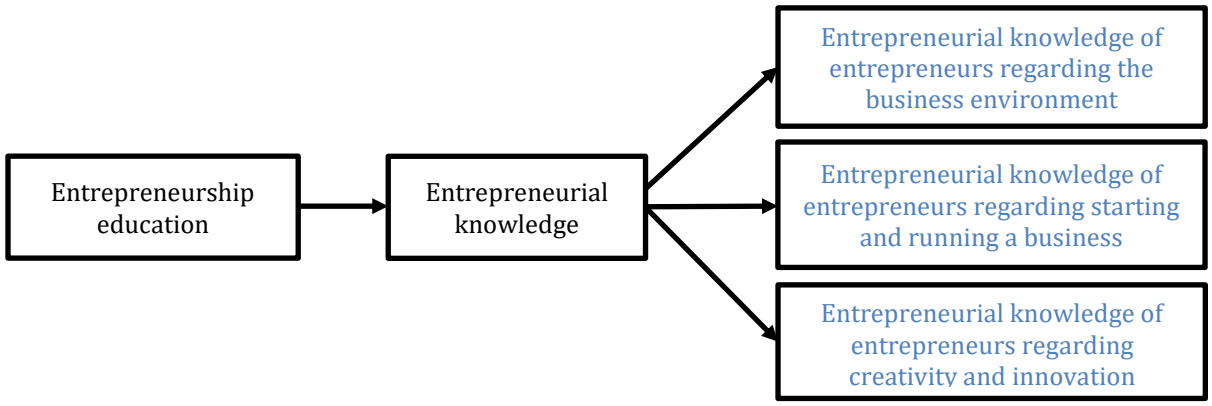


Figure 1. The impact of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs
Source: Author's own research results.

Methodologies

Research question

Based on the results of related theoretical research and the research's synthesis and analysis results for the documents, there are three (03) research hypotheses proposed below to measure the differences in the extent of the impact of entrepreneurship education on entrepreneurial knowledge of entrepreneurs. Research hypotheses include:

H1: There are differences in the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs regarding the business environment.

Hypothesis H1 is based on the assessment of Simović and Radović-Marković (2018). Simović and Radović-Marković (2018) showed that entrepreneurship education influences the skills and knowledge of new generations of entrepreneurs about the current business

environment of enterprises. Furthermore, the goal of entrepreneurship education is to change students' minds about how they view innovative activities and take risks in business (Jones et al., 2014), ready to adapt to new situations and improve the ability to work in an uncertain environment (Van Auken, 2013). Furthermore, De Clercq and Arenius (2006) determined that individuals will acquire the knowledge and skills needed to face the challenges of starting their businesses through undergoing formal business training. Therefore, entrepreneurship education must provide entrepreneurial knowledge of entrepreneurs about the business environment.

H2: There are differences in the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs regarding starting and running a business.

There are many studies on the role and influence of entrepreneurship education on starting and running a business of entrepreneurs (Barba-Sánchez and Atienza-Sahuquillo, 2018; Jena, 2020). In particular, research on the role of entrepreneurship education in the entrepreneurial intentions of entrepreneurs and students is currently a topic of much research focus. Many studies have shown that entrepreneurship education has a positive impact on the entrepreneurial intentions of entrepreneurs and students (Do Paço et al., 2015; Barba-Sánchez and Atienza-Sahuquillo, 2018; Jena, 2020). Therefore, we can see that entrepreneurship education provides entrepreneurial knowledge about starting and running a business. Hence, it contributes to regulating the behavior and intentions of entrepreneurs and students.

H3: There are differences in the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs regarding creativity and innovation.

Epure et al. (2019) further determined that entrepreneurship education will enhance innovation and creativity by providing innovation and creativity knowledge to entrepreneurs. More specifically, Wei et al. (2019) showed that there is a positive relationship between the perception of entrepreneurship education by students and the perception of innovation. Entrepreneurship education is a significant way for entrepreneurs to acquire resources and improve their innovation ability and innovative personality (Wei et al., 2019). At the same time, it builds multilevel learning channels for entrepreneurs by integrating different knowledge and value systems (Wei et al., 2019). In addition, entrepreneurship education is concerned with fostering the creative skills of entrepreneurs (McMullan et al., 2002; Gundry et al., 2014). These skills can be applied in practice, education, and innovation support environments (McMullan et al., 2002; Gundry et al., 2014). Performing an in-depth study of the entrepreneurship education mechanism, research for entrepreneurs determined that innovation and development can be further improved through research on entrepreneurship education (Morris et al., 2013). Therefore, entrepreneurship education affects the entrepreneurial knowledge of entrepreneurs regarding creativity and innovation.

Data collection

Data collection methods

To answer the research questions, the paper used data based on GEM – National Expert Survey – Individual-Level Data. The data collected are the data in 2017, because according to the GEM program regulations, data collected after three years is only published. Therefore, the researchers used the most up-to-date data currently available in 2017. Regarding the GEM program, GEM is a survey program conducted since 1999. The goal of this program was

to explore and evaluate the role of entrepreneurship in national economic growth, and the project developed a worldwide survey of entrepreneurship. In recent years, GEM has conducted surveys on entrepreneurship in more than 130 countries around the world. All GEM data is published and collected from the website www.gemconsortium.org.

Furthermore, to ensure the validity of database research, GEM's database is widely used in entrepreneurship research by many different researchers (Huggins and Thompson, 2012; Castaño et al., 2015; Barazandeh et al., 2015; Honjo, 2015; Wach, 2015; Mrożewski and Kratzer, 2016; Filculescu, 2016; Harms and Groen, 2017; Arafat and Saleem, 2017; Ali and Jabeen, 2020), The reason is that these data allow for comparisons between different countries in the world, as well as an in-depth analysis of the factors affecting entrepreneurship in each country. Clearly disclosed data and rigorous data collection are also factors that ensure data reliability.

In addition, to test the hypothesis, the research collected data from a group of countries in Eastern Europe. These countries were formerly part of the socialist alliance, and have a centrally planned economy. From 1991, along with the collapse of the Soviet Union and the Warsaw economic community, capitalist economies developed in these countries. As a result, these countries continue to carry out transformational economies. Furthermore, these countries are countries with high-income economies and, currently, have a high level of human development compared to other countries in the world. Furthermore, these countries are continuing to promote policies to encourage economic development in general and entrepreneurship in particular. From countries with a centrally planned economy, these countries gradually move to a market economy. Many private enterprises were established and operated in these countries. Currently, private enterprises and start-ups play an essential role in these countries. Furthermore, these countries have high levels of human development and are quite similar to each other. Therefore, it is also meaningful to evaluate the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs in countries in this region. In particular, it is necessary to consider the factors that influence entrepreneurship in these countries, including entrepreneurship education. Thus, it makes sense to examine the influence of entrepreneurship education on entrepreneurship in these Eastern European countries. From there, it is possible to consider the impact of entrepreneurship education on entrepreneurial knowledge in these countries. Data about these countries were collected from the GEM database in 2017.

Due to the limitation of the number of countries in the GEM database, the author has selected five countries from this database. These countries are Poland, Bulgaria, Croatia, Latvia, and the Slovak Republic. In addition, these are countries that still show different levels of economic development, human development, and educational development (see Tables 1 and 2). These elements have previously been discussed in the literature on entrepreneurship education. Furthermore, the most relevant driving factors for entrepreneurship education are economic growth and market development (Lin and Xu, 2017). Castañomartínez et al. (2015) stated that pressure from the international market creates a demand in businesses for students trained by high-quality, rigorous education. Since then, the quality of education has been influenced by factors such as economic quality (Markina, 2019). Lepoutre et al. (2011) argued that entrepreneurship education has different effects at different stages of human development. In addition, changes in the education system also have significant effects on entrepreneurship education (Kirby, 2004).

Overview of Eastern European countries

An overview of the economic development situation of Eastern European countries in 2019 and 2020 is presented in Table 1. As a result, Latvia and the Slovak Republic have developed countries. Poland, Bulgaria, and Croatia are developing countries (WorldBank, 2021). In terms of income level, only Bulgaria is the upper-middle-income economy, and other countries are high-income economies according to WorldBank standards (WorldBank, 2021). In 2020, due to the impact of the Covid 19 pandemic, most countries' economies will be negatively affected. The highest decrease was in Croatia, and the lowest reduction was in Poland.

Table 1. Economic overview in 2019 and 2020

Country	2019			2020		
	GDP (Billion USD)	GDP Growth (%)	GDP per Capita (USD)	GDP (Billion USD)	GDP Growth (%)	GDP per Capita (USD)
Poland	595.86	4.54	15,694	594.17	-2.70	15,656
Bulgaria	68.56	3.69	9,828	69.11	-4.15	9,975
Latvia	34.06	2.02	17,794	33.51	-3.62	17,619
Croatia	60.75	2.86	14,944	55.97	-8.37	13,828
Slovak Republic	105.12	2.51	19,273	104.57	-4.74	19,156

Source: Compiled by research using data from WorldBank (2021).

Furthermore, to have a different view of the characteristics of entrepreneurs in these countries, the research also performs an overview analysis of the situation of human development and education through two indicators, the Human Development Index (HDI) and the Education Index (UNDP, 2021a; UNDP, 2021b). HDI is a composite index that includes statistics on life expectancy, education (literacy rate, enrollment rate at different levels, and net attendance rate), GDP per capita income index, and some other factors of countries around the world (Stanton, 2007). A country has a higher HDI when life expectancy is higher, the level of education is higher, and the gross national income (PPP) per capita is higher (Stanton, 2007). The HDI helps create an overview of a country's development and an emphasis on individual human characteristics. Furthermore, to better clarify the status of the education situation, the research has also collected data on the Education Index of countries in Eastern Europe. An Education Index is a component of the HDI. This index is published annually by the United Nations Development Program. Additionally, the Education Index helps measure the educational attainment of countries (UNDP, 2021b). The results of the data collection on the HDI and the Education Index are presented in Table 2.

Table 2. Human Development Index and Education Index over the years

Country	Human Development Index			Education Index		
	2017	2018	2019	2017	2018	2019
Poland	0.865	0.872	0.880	0.866	0.866	0.869
Bulgaria	0.813	0.816	0.816	0.785	0.779	0.779
Latvia	0.847	0.854	0.866	0.876	0.883	0.883
Croatia	0.831	0.837	0.851	0.802	0.803	0.805
Slovak Republic	0.847	0.857	0.860	0.824	0.824	0.826

Source: Compiled by research using data from the Human Development Report (UNDP, 2021a; UNDP, 2021b).

Looking at Table 2, we can see that the Eastern European countries surveyed are all countries with a high level of human development (HDI > 0.8) (UNDP, 2021a). Poland is a country with a very high level of human development in 2019 (HDI > 0.88). Additionally, over the years, the HDI of countries has increased. This result shows that Eastern European countries have always focused on developing people in their countries. Among the countries surveyed, Croatia and Latvia were the two with the fastest-growing HDI (0.020 and 0.019, respectively). On the contrary, Bulgaria has the slowest increase in HDI (only 0.03) over the three years from 2017 to 2019.

In terms of the Education Index, most countries have a high level of education (Education Index > 0.8), only Bulgaria is assessed as having a medium level of education (Education Index = 0.779 in 2019). Furthermore, there was an increase in the Educational Index in all countries over the years. However, only Bulgaria has a decline. This result shows that the education policy in Bulgaria currently has many issues that need attention and resolution. Another specific thing is shown in Table 2 that only Latvia has an Education Index higher than HDI. Other countries have a lower Education Index than HDI. Thus, it shows that in Latvia the education system is very focused and interested in development.

Overview of the data collected from GEM

Based on the data collected from the GEM, there are 186 observed samples collected from 5 countries in Eastern Europe: Poland, Bulgaria, Latvia, Croatia, and the Slovak Republic. Here, the majority of samples collected in each country are 36 samples (19.4%), including Poland, Bulgaria, Latvia, and the Slovak Republic. It happened because the survey requirement was to survey a minimum of 36 observations for the GEM - National Expert Survey - Individual-Level Data in 2017. Additionally, the number of samples from Croatia is 42 samples (22.6%). In this paper, a total of 186 observed samples were used to analyze the difference in the evaluation of the effect of entrepreneurship education on entrepreneurial knowledge of entrepreneurs.

Data analysis

To achieve our goal of analyzing the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs, we used three questions in the data provided by GEM – National Expert Survey – Individual-Level Data in 2017. The respective specific questions used in the above report include:

- Entrepreneurial knowledge of entrepreneurs regarding creativity and innovation – *In my country, teaching in primary and secondary education encourages creativity, self-sufficiency, and personal initiative.*
- Entrepreneurial knowledge of entrepreneurs regarding starting and running a business – *In my country, teaching in primary and secondary education provides adequate attention to entrepreneurship and new firm creation.*
- Entrepreneurial knowledge of entrepreneurs regarding the business environment – *In my country, teaching in primary and secondary education provides adequate instruction in market economic principles.*

In GEM research, to collect data from surveys, the scale that the investigators used in the study for the above three questions is the Likert scale with five levels. The rating levels are, respectively: 1: “Completely False”; 2: “Somewhat false”; 3: “Neither true nor false”; 4: “Somewhat true”; 5: “Completely true”.

In addition, to analyze the difference in the evaluation of entrepreneurship education between different countries and show how that difference is, the analytical method used in the article is the One-way ANOVA analysis method. In terms of advantages, the One-way ANOVA analysis method is a statistical analysis method used to consider whether there is a difference in mean values in the population for observed variables. For the research objective in the article, there is a difference in countries for the criteria of entrepreneurial knowledge of entrepreneurs regarding creativity and innovation, entrepreneurial knowledge of entrepreneurs regarding starting and running a business, and entrepreneurial knowledge of entrepreneurs regarding the business environment. The test results give the Sig. value < 0.05 (the difference is significant at the level of 0.05), using the One-way ANOVA method is appropriate.

After that, the research continued to use the Turkey test for the post-hoc analysis with the assumption that there was an equal variance between the criteria groups. The results of this Turkey test show in more detail a difference (with Sig. value < 0.05) or no difference for the population mean (with Sig. value > 0.05) of the countries for the different criteria. Therefore, it is possible to show which countries have significant differences from other countries. Finally, with the results of the descriptive statistics of the respective data of the countries according to each criterion of mean value, we can see the extent of the difference in assessment between countries (which country has a higher rating and which country has a lower rating among the different countries). From there, we can have a more detailed view of the differences between countries in assessing the influence of entrepreneurship education on entrepreneurial knowledge.

Results

The evaluation of entrepreneurship, and the influence of education on entrepreneurship in Eastern European countries

To carry out hypothesis tests on the influence of entrepreneurship education on entrepreneurial knowledge, we need a general assessment and overview of the entrepreneurial environment and entrepreneurship education environment in these countries. The results in Table 3 show the estimation of the entrepreneurial environment through the Global Entrepreneurship Index. From the results in Table 3, we can see a decreasing trend in the rating of the entrepreneurship environment of Eastern European countries in the period 2015 to 2019. Only Poland has an increased rating (from 47.4 in 2015 to 49.5 in 2019). Furthermore, Latvia is the country with the highest decrease of 15.2 points, and this is a very high decrease (from 54.5 in 2015 to 39.3 in 2019). In 2019, Poland was the country with the best evaluation (49.5), and Bulgaria was the country with the lowest evaluation (30.1).

Table 3. Global Entrepreneurship Index over the years

Country	Global Entrepreneurship Index				
	2015	2016	2017	2018	2019
Poland	47.4	49.3	46.62	50.42	49.5
Bulgaria	42.7	41.6	22.69	27.79	30.1
Latvia	54.5	53.5	43.03	40.48	39.3
Croatia	40.6	39.9	30.84	34.02	36.1
Slovak Republic	45.4	46.4	44.11	44.87	42.6

Source: Compiled by research using data from the Global Entrepreneurship Monitor (2021).

To evaluate the influence of entrepreneurship education on entrepreneurship in Eastern European countries, GEM has conducted two criteria as two indicators to assess this influence. These two indicators are Basic School Entrepreneurial Education and Training and Post School Entrepreneurial Education and Training. These are two important indicators to measure the impact on entrepreneurship education of Eastern European countries over the years. The evaluation results of the two indicators are shown in Table 4.

Table 4. Basic School and Post School Entrepreneurial Education and Training Index over the years

Country	2014	2015	2016	2017	2018
Basic School Entrepreneurial Education and Training Index					
Poland	1.75	1.53	1.64	1.49	1.67
Bulgaria	n/a	1.53	1.64	1.90	1.79
Latvia	2.51	2.38	2.29	2.56	2.50
Croatia	1.68	1.32	1.61	1.54	1.52
Slovak Republic	2.21	1.98	2.06	1.96	1.65
Post School Entrepreneurial Education and Training Index					
Poland	2.54	2.32	2.05	2.70	2.45
Bulgaria	n/a	2.49	2.30	2.50	2.44
Latvia	3.17	3.23	2.89	3.02	2.86
Croatia	2.35	2.14	2.33	2.25	2.27
Slovak Republic	2.98	2.45	2.77	2.75	2.33

Source: Compiled by research using data from the Global Entrepreneurship Monitor (2021).

The results in Table 4 show that the evaluation of Basic School Entrepreneurial Education and Training of Eastern European countries from 2014 to 2018 is underrated. Most countries are rated low (the evaluations are less than two on a scale of five). Only Latvia was assessed the highest with a rating of 2.5 in 2018. It shows that Basic School Entrepreneurial Education and Training has not attracted and contributed to the entrepreneurial knowledge of entrepreneurs. In addition, the assessment trends decreased over the years. The Slovak Republic had the highest reduction of 0.56 (from 2.21 in 2014 to 1.65 in 2018). During this period, Bulgaria only saw an increase in the Basic School Entrepreneurial Education and Training Index (an increase from 1.53 in 2015 to 1.79 in 2018). It shows that Bulgaria has focused on Basic School Entrepreneurial Education and Training.

Regarding training and education at Post-School level, the assessments of the countries are higher than education and training at Basic School. All the ratings are above 2. Latvia is the highest evaluation with an evaluation value of 2.86 in 2018, and the Slovak Republic is the countries lowest among the surveyed countries at 2.33. However, the results show that the assessment tends to decrease for all countries in Eastern Europe over the years. Although Latvia is rated the highest, Latvia has the most downward trend among countries. The decrease was 0.31 (from 3.17 in 2014 to 2.86 in 2018). It shows that education and training at Post-School are having many problems in Eastern European countries, not meeting the needs of entrepreneurs in these countries.

Analysis of differences between countries on the influence of entrepreneurship education on entrepreneurial knowledge

To test the proposed hypotheses, the research uses One-way ANOVA analysis for each specific and corresponding question collected from GEM data. From there, it is possible to have an accurate view of the influence of education on the entrepreneurial knowledge of entrepreneurs.

Table 5 provides the results of the One-way ANOVA test for the difference in the impact of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding the business environment of Eastern European countries. The test results show that the Sig value of the ANOVA test has statistical significance (Sig. value = 0.000 < 0.005). Therefore, there exists a difference in the evaluation between the countries used for the analysis.

Table 5. Testing One-way ANOVA results for differences in the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding the business environment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	34.280	4	8.570	8.573	***0.000****
Within Groups	178.937	179	1.000		
Total	213.217	183			

** The statistical value is significant at the 0.05 level.*

Source: Author's own research results.

After the results of the ANOVA test were statistically significant in Table 5, the research conducted an in-depth analysis using the Turkey post-hoc test method. This method specifically presents the difference between countries in the assessment of the Sig. value is statistically significant (Sig. Value < 0.05). The results are reviewed in Table 6. Regarding the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs regarding the business environment in Eastern European countries, the post-hoc analysis identified the existence of differences between the assessment of entrepreneurs from Latvia compared to that of entrepreneurs from Poland, Bulgaria, and Croatia. Furthermore, there is also a difference in the estimation between entrepreneurs from the Slovak Republic and Poland.

Table 6. Multiple comparisons results for differences in the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding the business environment

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.
Poland	Bulgaria	-0.51587	0.23734	0.195
	Latvia	***-1.22857***	***0.23900***	***0.000****
	Croatia	-0.14286	0.22883	0.971
	Slovak Republic	-0.71032	0.23734	0.026
Bulgaria	Poland	0.51587	0.23734	0.195
	Latvia	***-0.71270***	***0.23734***	***0.025****
	Croatia	0.37302	0.22709	0.472
	Slovak Republic	-0.19444	0.23566	0.923
Latvia	***Poland***	***1.22857***	***0.23900***	***0.000****
	Bulgaria	***0.71270***	***0.23734***	***0.025****
	Croatia	***1.08571***	***0.22883***	***0.000****
	Slovak Republic	0.51825	0.23734	0.191

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.
Croatia	Poland	0.14286	0.22883	0.971
	Bulgaria	-0.37302	0.22709	0.472
	Latvia	***-1.08571***	***0.22883***	***0.000****
	Slovak Republic	-0.56746	0.22709	0.095
Slovak Republic	***Poland***	***0.71032***	***0.23734***	***0.026****
	Bulgaria	0.19444	0.23566	0.923
	Latvia	-0.51825	0.23734	0.191
	Croatia	0.56746	0.22709	0.095

** The mean difference is significant at the 0.05 level.*

Source: Author's own research results.

Looking more specifically at this difference, the research conducts a descriptive statistical review of the mean in the evaluation of the influence of education on entrepreneurial knowledge to entrepreneurs regarding the business environment of countries in Eastern European. This result is presented in Table 7. On average, Latvian entrepreneurs have the highest evaluation (2.66), followed by the Slovak Republic (2.14), Bulgaria (1.94), Croatia (1.57), and Poland (1.43), respectively. This result shows that entrepreneurship education is highly valued in Latvia for providing entrepreneurial knowledge of entrepreneurs regarding the business environment. Furthermore, the providing of entrepreneurial knowledge regarding the business environment to entrepreneurs in Latvia is better than in the rest of the countries.

Table 7. Descriptive statistics on assessing the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs regarding the business environment of entrepreneurs

Country	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Poland	35	1.4286	0.77784	0.13148	1.00	4.00
Bulgaria	36	1.9444	1.06756	0.17793	1.00	5.00
Latvia	35	2.6571	1.18676	0.20060	1.00	5.00
Croatia	42	1.5714	0.83060	0.12816	1.00	5.00
Slovak Republic	36	2.1389	1.09942	0.18324	1.00	5.00

Source: Author's own research results.

The ANOVA test was continued to examine the differences in the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs about starting and running a business in Eastern European countries. The results are shown in Table 8. The results show that there is a statistically significant difference in the evaluation between countries (Sig. value = 0.000 < 0.05). This result indicates the eligibility to perform post-hoc analysis using the Turkey method.

Table 8. Testing One-way ANOVA results for differences in the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding starting and running a business

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	24.546	4	6.136	6.432	***0.000****
Within Groups	169.815	178	0.954		
Total	194.361	182			

** The statistical value is significant at the 0.05 level.*

Source: Author's own research results.

The post-hoc analysis results using the Turkey method are provided in Table 9. The results show that the only difference in evaluation between entrepreneurs in Latvia and other countries is Poland, Bulgaria, Croatia, and the Slovak Republic. The rest of the countries do not have any difference in the measure of entrepreneurial knowledge due to Sig. Value > 0.05. Meanwhile, on average, Latvian entrepreneurs reported the highest acceptance of the influence of education on entrepreneurial knowledge among entrepreneurs compared to the rest of the country (the results are presented in Table 10). It shows that entrepreneurship education to provide entrepreneurial knowledge in Latvia is more focused and appreciated than in the other countries (except for the Slovak Republic). Therefore, the level of investment in education about entrepreneurship in Latvia is very good.

Table 9. Multiple comparisons results for differences in the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding starting and running a business

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.
Poland	Bulgaria	-0.37778	0.23186	0.481
	Latvia	***-1.07059***	***0.23520***	***0.000****
	Croatia	-0.10000	0.22354	0.992
	Slovak Republic	-0.37778	0.23186	0.481
Bulgaria	Poland	0.37778	0.23186	0.481
	Latvia	***-0.69281***	***0.23358***	***0.028****
	Croatia	0.27778	0.22184	0.721
	Slovak Republic	0.00000	0.23022	1.000
Latvia	***Poland***	***1.07059***	***0.23520***	***0.000****
	Bulgaria	***0.69281***	***0.23358***	***0.028****
	Croatia	***0.97059***	***0.22533***	***0.000****
	Slovak Republic	***0.69281***	***0.23358***	***0.028****
Croatia	Poland	0.10000	0.22354	0.992
	Bulgaria	-0.27778	0.22184	0.721
	Latvia	***-0.97059***	***0.22533***	***0.000****
	Slovak Republic	-0.27778	0.22184	0.721
Slovak Republic	Poland	0.37778	0.23186	0.481
	Bulgaria	0.00000	0.23022	1.000
	Latvia	***-0.69281***	***0.23358***	***0.028****
	Croatia	0.27778	0.22184	0.721

** The mean difference is significant at the 0.05 level.*

Source: Author's own research results.

Table 10. Descriptive statistics to assess the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding starting and running a business

Country	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Poland	35	1.4000	0.77460	0.13093	1.00	4.00
Bulgaria	36	1.7778	0.98883	0.16480	1.00	4.00
Latvia	34	2.4706	1.26096	0.21625	1.00	5.00
Croatia	42	1.5000	0.89033	0.13738	1.00	5.00
Slovak Republic	36	1.7778	0.92924	0.15487	1.00	4.00

Source: Author's own research results.

Finally, to test the difference in entrepreneurs' assessment of the influence of entrepreneurship education on the knowledge of innovation and creativity of Eastern European countries, the One-way ANOVA test method continues to be used. The test results

in Table 11 show that the Sig. value is statistically significant (Sig. Value < 0.05). Entrepreneurs from countries in Eastern Europe differ in their assessment.

Table 11. Testing one-way ANOVA results for differences in the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding creativity and innovation

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23.275	4	5.819	5.576	***0.000****
Within Groups	186.806	179	1.044		
Total	210.082	183			

** The statistical value is significant at the 0.05 level.*

Source: Author's own research results.

Because there is a difference in the assessment between entrepreneurs, the research continues to use the Turkey post-analysis method to evaluate this difference in detail. The results are provided in Table 12. The results show that there is a statistically significant difference in the level of assessment between entrepreneurs from Latvia and their counterparts from Poland and Croatia. More specifically, the evaluation of entrepreneurs from Latvia was higher for the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding creativity and innovation than their counterparts from Poland and Croatia (descriptive statistical results are presented in Table 13). Furthermore, there is no difference in rating between Latvia and Bulgaria, the Slovak Republic. This result shows that countries such as Bulgaria and the Slovak Republic have also paid great attention to investing in the education of entrepreneurial knowledge of entrepreneurs regarding creativity and innovation. In addition, countries like Poland and Croatia need to invest more in educating entrepreneurial knowledge of entrepreneurs regarding creativity and innovation to improve the effectiveness of entrepreneurship education.

Table 12. Multiple comparisons results for differences in the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding creativity and innovation

(I) Country	(J) Country	Mean Difference (I-J)	Std. Error	Sig.
Poland	Bulgaria	-0.31508	0.24250	0.692
	Latvia	***-0.91429***	***0.24420***	***0.002****
	Croatia	0.10952	0.23381	0.990
	Slovak Republic	-0.31508	0.24250	0.692
Bulgaria	Poland	0.31508	0.24250	0.692
	Latvia	-0.59921	0.24250	0.102
	Croatia	0.42460	0.23203	0.360
	Slovak Republic	0.00000	0.24079	1.000
Latvia	***Poland***	***0.91429***	***0.24420***	***0.002****
	Bulgaria	0.59921	0.24250	0.102
	Croatia	***1.02381***	***0.23381***	***0.000****
	Slovak Republic	0.59921	0.24250	0.102
Croatia	Poland	-0.10952	0.23381	0.990
	Bulgaria	-0.42460	0.23203	0.360
	Latvia	***-1.02381***	***0.23381***	***0.000****
	Slovak Republic	-0.42460	0.23203	0.360
Slovak Republic	Poland	0.31508	0.24250	0.692
	Bulgaria	0.00000	0.24079	1.000
	Latvia	-0.59921	0.24250	0.102
	Croatia	0.42460	0.23203	0.360

** The mean difference is significant at the 0.05 level.*

Source: Author's own research results.

Table 13. Descriptive statistics on assessing the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding creativity and innovation

Country	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Poland	35	1.6571	1.13611	0.19204	1.00	5.00
Latvia	35	2.5714	1.06511	0.18004	1.00	5.00
Croatia	42	1.5476	0.91605	0.14135	1.00	5.00

Source: Author's own research results.

The above test results for the difference between countries have clarified the influence of entrepreneurship education on entrepreneurial knowledge. Thus, it can be said that there is evidence and actual statements to prove the following hypotheses:

H1: There are differences in the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs regarding the business environment.

The results of the statistical test show the different assessments of the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding the business environment. In detail, there is a difference in estimation between entrepreneurs from Latvia and entrepreneurs from Poland, Bulgaria, and Croatia. Regarding the average value in the estimation, the entrepreneurs from Latvia estimated the influence of the education system on the entrepreneurial knowledge of entrepreneurs regarding the business environment higher than the other three countries. In addition, there exists a difference in the assessment of entrepreneurs from two countries, Poland and the Slovak Republic. In more detail, the rating of entrepreneurs from the Slovak Republic is higher than that of their colleagues from Poland. Therefore, it can be said that there is evidence to support the acceptance of hypothesis H1.

H2: There are differences in the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs regarding starting and running a business.

Analysis of the collected test results shows that the difference in entrepreneurship education affects the entrepreneurial knowledge of entrepreneurs regarding starting and running a business. More specifically, there is a difference in the assessment of Latvian entrepreneurs compared to all entrepreneurs from the rest of the country (Poland, Bulgaria, Croatia, and the Slovak Republic). Furthermore, in terms of the mean value of the assessment, the report also shows that the degree of entrepreneurial knowledge provided to start and run a business that educates Latvian entrepreneurs is higher than that of similar entrepreneurs from other countries. In detail, the highest assessment is made by entrepreneurs from Latvia. It is followed by the Slovak Republic and Bulgaria with equal assessments, followed by Croatia and Poland, respectively. Therefore, we conclude that hypothesis H2 is accepted.

H3: There are differences in the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs regarding creativity and innovation.

The results of the statistical test show that Latvian entrepreneurs have a difference in the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs about creativity and innovation compared to their counterparts from Poland and Croatia. In detail, the average rating of entrepreneurs from Latvia is higher than the average rating of entrepreneurs from the other two countries. Furthermore, other countries did not show any difference in the evaluations. Therefore, the supporting evidence for H3 is weak, and we only partially accept hypothesis H3.

Discussions and Conclusions

From the research results analyzed above, we can see a difference in the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs in Eastern European countries. More specifically, there is a difference in the assessment of entrepreneurs from Latvia and entrepreneurs from other countries, namely Poland, Bulgaria, Croatia, and the Slovak Republic. The degree of influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs was not related to the size of the economy, the average income of individuals, the rate of economic development, the level of human development, the development of entrepreneurship, or the development of the national educational system. In detail, the statistical results also show that the level of influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs is low. Most countries have an evaluation below 2 (on a 5-point scale), and only Latvia has an evaluation higher than 2. In general, entrepreneurs in Latvia rate the country's entrepreneurship education affects entrepreneurial knowledge of entrepreneurs regarding the business environment higher than their counterparts from the countries analyzed are Poland, Croatia, Bulgaria, and the Slovak Republic.

Furthermore, the results also show that entrepreneurs in Latvia rate the influence of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding starting and running a business, entrepreneurial knowledge of entrepreneurs regarding creativity and innovation are higher than that of entrepreneurs in the rest of the country. More specifically, our analysis shows that entrepreneurs from Latvia report a higher level of impact of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding the business environment than Poland, Bulgaria, and Croatia. Furthermore, the level of impact of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding starting and running a business is higher than that of Poland, Bulgaria, Croatia, and the Slovak Republic, and the level of impact of entrepreneurship education on entrepreneurial knowledge of entrepreneurs regarding creativity and innovation is higher than that of Poland and Croatia. Among the five countries, Latvia's entrepreneurship index is not the highest (ranked third out of five countries in 2019, but it is the country that provides the highest support for entrepreneurship education of the five countries). Furthermore, the downward trend in the assessment continued throughout the years of Eastern European countries. It shows that there are still many problems with the role of entrepreneurship education in the entrepreneurial knowledge of entrepreneurs in these countries.

Among the countries studied, the Slovak Republic is the most developed economy with a higher GDP per capita than other countries. However, this country has the second-lowest Entrepreneurship Index (lower than Poland), the HDI and the Education Index coefficient ranked third, the Entrepreneurial Education and Training Index ranked fourth among studied countries. It shows that the level of support for the educational system for entrepreneurs in the Slovak Republic is lower than in other countries. In addition, the results show that Latvia is the second most developed country (in terms of GDP per capita) among countries. Furthermore, it has the highest level of education and human development. Latvia is also the country with the greatest influence of the entrepreneurship education system on the entrepreneurial knowledge of entrepreneurs. Thus, the level of education and economic development of the country has an influence on entrepreneurship education in the countries. However, this impact also differs from country to country. In particular, we consider in detail

the case of Bulgaria. Bulgaria is the least developed of the countries assessed in Eastern European countries and has the lowest HDI and Education Index. However, Bulgaria has the second highest rating for entrepreneurship education among the countries above. It shows that Bulgaria attaches great importance to the development of entrepreneurship education in its education policy.

Therefore, we can conclude that entrepreneurship education affects entrepreneurship and entrepreneurial knowledge. The reason is that individual entrepreneurs are often influenced by many push-and-pull factors (Matlay and Storey, 2003). Therefore, this influence is also affected by many aspects depending on the business environment and the country. It is consistent with the observations of Matlay and Carey (2007). Matlay and Carey (2007) identified that factors (such as context, coherence, and comparability) are significant elements to bridge the gap between entrepreneurship education and the entrepreneurship sector. To clarify this issue, Kuckertz (2013) argued that different individuals expect various concepts and information from educators about entrepreneurship. In it, the subjects may come from many countries. In his research, Kuckertz (2013) also determined that there is a relationship between entrepreneurial knowledge and entrepreneurial activity among 42 countries around the world. The results show that this relationship has positively affected the ability to start a business and create jobs later in countries where people are provided with entrepreneurial knowledge. Therefore, business knowledge is a valuable resource for business success (Haynie et al., 2010). Herein, this entrepreneurial knowledge is related to entrepreneurial activities such as identifying business opportunities, starting a business, marketing, finance, organization, innovation, creativity, etc. (Barba-Sánchez and Atienza-Sahuquillo, 2018; Ni and Ye, 2018; Simović and Radović-Marković, 2018; Epure et al., 2019; Wei et al., 2019; Jena, 2020). Thus, it can be said that investing in entrepreneurship education will contribute to the enhancement of entrepreneurial knowledge and positively affect the entrepreneurship of countries. However, Matlay and Carey (2006) also found that the emerging body of knowledge in this topic has been plagued by considerable conceptual and contextual difficulties. Therefore, countries need to pay attention to the national characteristics to develop entrepreneurship education in the best way.

However, the indicators of economic development, the size of the economy, the national entrepreneurship index, the level of human development index, and the level of national education index are not indicators to be able to make good predictions about entrepreneurial knowledge and characteristics of entrepreneurs. Moreover, there are differences in the assessment of entrepreneurship education between different countries. The reason may be due to differences in educational policies, goals, and levels of acceptance of entrepreneurs across countries. Thus, further studies on factors affecting entrepreneurial knowledge and entrepreneurship education need to consider the combination of multiple aspects affecting entrepreneurship. From there, a suggestion for countries in this region to improve their entrepreneurial knowledge is to focus on investing in entrepreneurship education. It contributes to the development of entrepreneurship, as well as entrepreneurial activities. More specifically, countries must develop specific programs and goals for entrepreneurship education activities that are appropriate for the characteristics of each country and the characteristics and acceptability of entrepreneurs in entrepreneurship education.

This research provides some contributions. First, it broadens the entrepreneur's understanding of entrepreneurial knowledge. These are entrepreneurial knowledge of entrepreneurs regarding the business environment, entrepreneurial knowledge of entrepreneurs regarding entrepreneurship, and entrepreneurial knowledge of entrepreneurs regarding innovation and creativity. Second, this article also highlights the role of entrepreneurship education in providing entrepreneurial knowledge to entrepreneurs. Third, this study provides information on the influence of entrepreneurship education on entrepreneurs' entrepreneurial knowledge through a cross-country analysis. From this issue, we can see in detail the role of entrepreneurship education in entrepreneurship currently. Also, this is meaningful research. First, it contributes to the promotion of research on the influence of entrepreneurship education on the entrepreneurial knowledge of entrepreneurs in the future. Second, this is a basis that contributes to decision-making support for policymakers, especially educational administrators.

Regarding future research, research may pose some issues, such as supporting factors for entrepreneurial knowledge of entrepreneurs and improving the level of entrepreneurship education in countries. Furthermore, the difference in entrepreneurship education of countries for specific fields or specific occupations should be considered.

Despite many efforts, this study still has inherent limitations. The first limitation is related to the nature and characteristics of the data used for the analysis in this study. The GEM-designed global structured survey was used for analysis. However, the number of observed samples used in the study was small. The sample size of some countries (Poland, Bulgaria, Latvia, and the Slovak Republic) is only 36 samples, and the total number of samples studied is 186 observed samples. Therefore, the study cannot further analyze the factors related to and affect entrepreneurship education. In addition, there are limitations regarding the analytical methods used, the One-way ANOVA method, and the post-hoc Turkey test method. On the basis of these limitations, we appreciate that an in-depth analysis of the methods and content of the research objects can be done in the future.

Acknowledgement

This paper was co-financed by The Bucharest University of Economic Studies during the PhD program.

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