

FACTORS INFLUENCING ENTREPRENEURIAL INTENTIONS AMONG THE STUDENTS IN THE BALTIC SEA REGION COUNTRIES

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Abstract. This research presents a comparison of the impact of personal and environmental factors on the entrepreneurial intention of students living in Baltic Sea region countries. Data on students' intentions to start their own businesses was obtained from 10054 respondents studying in Estonia, Finland, Lithuania, Poland, and Sweden by implementing Global University Entrepreneurial Spirit Students' Survey (GUESSS) in 2021.

Data analysis was conducted using modified Krueger's (2009) entrepreneurial intention model based on the Theory of Planned Behaviour (TPB). Six hypotheses were tested using the data received from all respondents and the data of individual sub-samples broken down by gender, level of study, the field of study, and country of residence. A positive relationship with students' entrepreneurial intentions was clarified and the selected hypotheses were proved by analysing all variables of all sub-samples, except for three in the case of Lithuania and two in the case of Sweden and Finland due to insufficient level of statistical significance.

Keywords: students, entrepreneurial intentions, social environment, Baltic Sea region, cross-countries comparison.

JEL Classification: J24, L25, L26.

Introduction

Entrepreneurs are known as having strong roles in goods and services provision, working places creation, employee' skills development, innovating, income generating and, in general, developing the competencies of new labor market attendees and the national economy (Ali & Abou, 2020; Bogatyreva et al., 2022; Duong et al., 2020; Emami et al., 2021; Shepherd et al., 2020; Urbano et al., 2018). In addition, a high entrepreneurial orientation has impact on international performance as well (Sedziniauskienė & Sekliuckienė, 2020).

Studies by Ajzen (1991), Gorgievski et al. (2017) and other researchers revealed that intention has a significant impact when we seek to predict a person's future behavior, including one's business creation and not depending on the fact that actual career choices of young people, especially students, may differ from their intentions during participation in the survey. Since 2009, several attempts have been made to analyze the formation of entrepreneurial intentions, including economic and cultural factors. Liñán and Chen (2009) conducted one of the first studies to clarify the process of entrepreneurial intention formation considering economic and cultural factors. In

recent years, researchers analyzed the influence of family, citizen mentality, and culture on entrepreneurial intention formation in separate countries, especially in developing economies (Kayed et al., 2022; Mwita, 2019).

Students are the most active and ambitious part of young people, so identifying the factors influencing their intention to start their own business and the strength of each factor is genuinely relevant to all stakeholders – students, higher education institutions, labor market analytics and policymakers. There were published many scientific articles analyzing student entrepreneurship and the factors influencing it in recent years (Brás, 2020; Kanyan et al., 2021; Mwita, 2019). Authors of these articles, based on the examples of countries of emerging economies, tried to determine the strength of students' entrepreneurial intentions considering economic, social, cultural, and public opinion, social norms, family traditions, gender roles in society and other contexts. These studies are remarkably interesting and valuable but are limited when trying to identify factors independent of the country's economy, culture, and traditions, as well as country-specific factors. Unfortunately, such surveys are limited, especially among European countries. As a result, various authors argued that more research is needed for the analysis of social

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norms' impact on entrepreneurial intentions in different countries.

There was little research on entrepreneurial intentions and the strength of desire to start their own business among the students in the Baltic Sea region countries. One article, published in 2006 by Estonian researchers, analyzed students' attitude and intention towards entrepreneurship at Tallinn University of Technology (Venesaar et al., 2006). Remeikiene et al. (2013) provided some information about the intentions of Lithuanian students to start their businesses. However, only students from two study programs – Economics and Mechanical Engineering at the Kaunas University of Technology – participated in this survey. Brás (2020) made a comparison of economic and institutional factors that influence entrepreneurship in Latvia and in all Baltic countries. Gorgievski et al. (2017) researched the entrepreneurial intentions of Spanish, Dutch, German, and Polish students. They found out that entrepreneurial intentions of respondents related to openness and self-enhancement values and that these relationships were only partly influenced by self-efficacy and social norms. Pöder et al. (2019) analyzed entrepreneurship competencies and activities of alumni from the Estonian University of Life Sciences and revealed that their studies at the university had a significant impact on the formation of leadership and problem-solving skills, critical thinking, and ability to develop innovative ideas.

Researchers in recent years most used Krueger's (2009) model of entrepreneurial intentions based on the Theory of Planned Behavior (TPB). Various authors agree that the principal factors influencing entrepreneurial intentions are personal attitude and perceived behavioral control. Unfortunately, no consensus on other factors have been included in the international surveys, and indicators have been used for measuring these factors. There is a lack of cross-countries surveys. The development of the survey models and the selection of variables appropriate for cross-country surveys did not fully exploit the potential. Knowledge of the factors that have the impact on entrepreneurial intentions in countries with similar mentality could be useful for improvement study programs, development of infrastructure for entrepreneurial activities simulation, creation of business incubators and implementation policies for start-ups support.

Historically, countries around the Baltic Sea have closed economic and cultural relations. Inhabitants of these countries have similar mentality not depending on the fact they speak different languages. The consistent development of these countries, except Sweden, restricted a few long-term periods of occupation. Due to the differences in educational systems of these countries, distinct cultural and mental self-awareness of the population, different entrepreneurial experiences and living standards, arisen interest in the analysis and comparison of entrepreneurial intentions of students as representatives of the most active and prospective population group and strength of the impact of factors having a relationship with entrepreneurial intention.

The scientific problem analyzed in this article – the identification of factors differently influencing the entrepreneurial intentions of students living in five Baltic Sea region countries. The aim of the investigation – to make the comparison of the impact of students' personal attitudes, perceived behavioral control and three main factors of social environment on their entrepreneurial intentions in general and separately according to gender, field of study and level of study in Estonia, Finland, Lithuania, Poland, and Sweden.

The main novelty of this research is modified model that expands Krueger's (2009) Integrated Model of Entrepreneurial Intentions (KEI) by deeper structuring the variables used for measuring the influence on students' entrepreneurial intentions and by dividing the variable Social Environment into three sub-variables: Closed Personal Environment, Society's Opinion, and University's Impact. This action allowed clarification of impact of various indicators on students' entrepreneurial intentions in sub-samples by respondents' gender, level of study, the field of study, and country of residence. This survey also filled a gap in knowledge about the students' entrepreneurial intentions in the Baltic Sea region countries and allowed cross-countries comparison of obtained results.

1. Theoretical background

1.1. Literature review

Ajzen's (1991) Theory of Planned Behavior (TPB) has been the most intensively studied in scientific publications and widely used to study entrepreneurial intentions (EI) and behavior for several years and could be valued as a traditional tool in researching this topic. According to Esfandiari et al. (2019), the TPB is based on the approach that the motivation promote some behavior grounded on: a) behavior, b) social or subjective norms, and c) perceived behavioral control.

Krueger et al. (2000) more than two decades ago formulated idea that intention is the most important predictor of future behavior. Authors of this article failed to find authors who would question the acceptability of this idea. Regardless, entrepreneurial intentions have a personal and individual-specific nature. Other authors (Mbuya & Schachtebeck, 2016) argue that EI inevitably influences various external factors and contextual domains. The scientific debate focuses on the factors influencing EI and the strength of their influence. An analysis of the literature showed that most researchers, with a few exceptions, pointed to two factors influencing the motivation to think about self-employment and intention to start a new business – personal attitude towards becoming an entrepreneur and perceived behavioral control. Other factors vary from publication to publication. For example, Fernandes and Aurélio (2020) state that the most critical entrepreneurs' personality dimensions are openness to experience, conscientiousness, and extraversion.

A personal attitude (PA) towards entrepreneurship, according to Miralles et al. (2017), shows the degree to

which a person has a favorable or unfavorable approach towards a particular behavior. A positive attitude towards entrepreneurial behavior and the consequences of its outcomes has a positive impact on entrepreneurial behavior, such as venture creation (Esfandiar et al., 2019). Without denying the influence of PA on EI, Sitepu and Azhar (2019) proposed a discussion and investigated to clarify the ways and mechanisms of how PA influence EI – directly, indirectly, or mixed.

Perceived Behavioral Control (PBC), according to Miralles et al. (2017) show the level of effort (low or high) needed to perform the behavior of an individual. According to Doanh and Bernat (2019), PBC refers to persons' beliefs about sufficient business knowledge, skills, and the ability to start building their businesses. Sitepu and Azhar (2019) argued that PBC is the belief in how strongly the behavior is controlled. Moriano et al. (2011), Sitepu and Azhar (2019) pointed out that an individual's beliefs about the ability to perform a specific behavior could be, among other factors, influenced by social beliefs. This approach refers to the closed perceived link between behavioral control and social norms. On the other hand, a person with a strong belief in ability to perform a certain behavior can have a strong intention to achieve a particular target (Doanh & Bernat, 2019) and shows this element's connection with the PA.

According to Ajzen (1991), Social Norms (SN) describe the perceived social pressure to perform or not to perform a particular behavior. According to Esfandiar et al. (2019), SN shows how an individual perceives that his or her behavior is consistent with the thoughts of other members of society. Social norms and public opinion derive from society's cultural values and influence the understanding of the benefits of entrepreneurial activities. Thus, perceived social norms affect the desirability of those interested in self-employment (Esfandiar et al., 2019). Nevertheless, cultural environment and SN have a different impact on EI in different countries and even in different regions inside the country (Kayed et al., 2022).

The impact of the social norm on Entrepreneurial intention including cross-countries or cross-cultures examination has been analyzed by Gorgievski et al. (2017), Liñán et al. (2013), Moriano et al. (2011) and other researchers. For instance, Elfving et al. (2017) found out that in the US, compared to European countries, support for new business creation from society's side is strong. Unfortunately, such surveys are not numerous, especially in European countries. As a result, various authors argue that there is a need for more research on impact of social norms on EI in different countries.

Some publications that presented results on the relationship between self-efficacy (in some cases entrepreneurial self-efficacy) and entrepreneurial intention, self-efficacy, and other elements such as personal attitude, perceived behavioral control, and social norms (Doanh & Bernat, 2019; Gorgievski et al., 2017; Mbuya & Schachtebeck, 2016; Mustafa et al., 2016; Moriano et al., 2011) are found. A few researchers assessed self-efficacy as

a critical predictor of EI (Doanh & Bernat, 2019; Miranda et al., 2017) but did not provide a homogeneous understanding of the essence of this concept. For instance, Baum et al. (2017) defined self-efficacy as the self-confidence of entrepreneurs in performing a specific task. Other authors described self-efficacy as a person's confidence in his/her ability to control the entrepreneurial processes (Tsai et al., 2014). A survey conducted by Prodan and Drnovsek (2010) seeking to clarify the EI of students at the technical faculties of the University of Cambridge and the University of Ljubljana revealed that self-efficacy is the most influential factor predicting EI. Some researchers agree with the widely discussed idea of the importance of self-efficacy in determining entrepreneurial thinking (Doanh & Bernat, 2019) and the idea of subjective norms that reflect an individual's expectations for specific behaviors that may affect his/her self-efficacy (Miranda et al., 2017). However, there is no common opinion on how self-efficacy affects EI – directly or indirectly, for instance, through perceived feasibility (Doanh & Bernat, 2019). Considering the above evidence and Bandura's (1989) observation that perceived personal control meaningfully overlaps with perceived self-efficacy, we used only variable PBC in our survey.

Researchers mentioned variables such as entrepreneurial competencies (Zdolsek Draksler & Sirec, 2021), entrepreneurship education (Cera et al., 2020), proactive personality and fear of fail (Mustafa et al., 2016), entrepreneurial capacity, subjective norms, and fear of risk (Mbuya & Schachtebeck, 2016) or fear of failure and perceived opportunity (Tsai et al., 2016) when analyzing various aspirations of young people thinking about entrepreneurship. Research provided by Gamage and Henegedara (2019) among undergraduate students in Sri Lanka revealed that locus of control also strongly affects an individual's EI. Sitepu and Azhar (2019) attempted to elucidate how variables such as intellectual intelligence, emotional intelligence, creativity, moral commitment, and social support can determine the final level of EI. Gorgievski et al. (2017) revealed the difference in the impact of SN on EI among students in Denmark, Germany, Poland, and Spain.

Kennedy et al. (2003) already two decades ago noticed that expectations from family, friends and other significant persons are key factors influencing student behavior and subjective norms. As a result, according to Liñán et al. (2013), closer environmental expectations are worth incorporating into research on EI. Liñán and Chen (2009) stated that support for entrepreneurial activity, received from a broader or closer environment, allow person to feel more inclined towards that career path. Ali and Abou (2020) showed the importance of innovativeness and cultural values on students' EI, Liu (2021) revealed the importance of family on students' EI in the context of national culture and Ouazzani et al. (2021) – an influence of cultural context on newly established ventures grows. Seeking to show more precisely the relation of main personality traits and various environmental factors on students, the impact of environmental factors was analyzed on two levels – using separate variables such as closed

personal environment, society's opinion, and university's impact and new variable social environment that combined separate variables.

1.2. Research model and hypotheses

Entrepreneurial behavior by various authors is considered as a driver that can influence the decision to start a new business before individuals examine the practical possibilities of their abilities. Intention-based models, including aspects of indirect influence, provide a better understanding of the factors involved in predicting business creation and the consequences of implementing these intentions. The intention is to promote an entrepreneurial event, such as a new venture establishment, only if the following critical conditions exist: perception of the desirability and feasibility of an entrepreneurial intention and propensity to act (Esfandiar et al., 2019).

To provide a more comprehensive understanding of entrepreneurial behavior, Krueger (2009) combined the Theory of Planned Behavior (TPB) and the Shapero Entrepreneurial Event model (SEE) (Shapero & Sokol, 1982). The model, which in scientific literature is termed as KEI, includes the propensity to act, desirability, and feasibility from the SEE model and self-efficacy and social norms from the TPB approach. Since then, researchers started to use this theoretical model and proposed many variously modified versions of this model but remained the same essence of this model.

The need to adapt the model in some cases appeared, taking into consideration different tasks that the researchers aimed at and the factors that researchers saw as motivating EI and worth inclusion into the analysis. Esfandiar et al. (2019) modified the KEI model seeking to clarify the understanding of EI in terms of an integrated approach. Anjum et al. (2020) proposed using variables, such as a passion for inventing and finding and included them in this model.

The relationship among entrepreneurial intentions, personal attitude, perceived behavioral control and social environment is not clearly established. According to the findings above, the modified Krueger's (2009) entrepreneurial intention model based on the Theory of Planned Behavior expanded possibilities for analysis of students' entrepreneurial intentions at cross-countries level. Researchers traditionally used this model for measuring of impact of variables personal attitudes (PA) and perceived behavioral control (PBC) on variable EI. Instead of a variable Social Norms (SN), we included the variable Social Environment (SE) and three additional sub-variables: Closed Personal Environment (CPE), Society's Opinion (SO) and University's Impact (UI). A modified theoretical model for measuring students' entrepreneurial intentions with various variables is presented in Figure 1.

In fact, what is essential for a successful study is not the version of the theoretical model but the variables included in this model and the indicators used to determine the values for the mathematical calculations. To elucidate the impact of the variables on EI using above presented theoretical model, we formulated the following hypotheses:

- H1: There is a positive relationship between PA and EI.
- H2: There is a positive relationship between PBC and EI.
- H3: There is a positive relationship between SE and EI.
- H4: There is a positive relationship between CPE and EI.
- H5: There is a positive relationship between SO and EI.
- H6: There is a positive relationship between UI and EI.

These hypotheses were tested by using a variety of data sets: all sample data and sub-sample data, disaggregated by gender of respondents, the field of study, level of study in general and separately for each country analyzed.

To assess the relationship between student entrepreneurship and its factors, the correlation analysis was

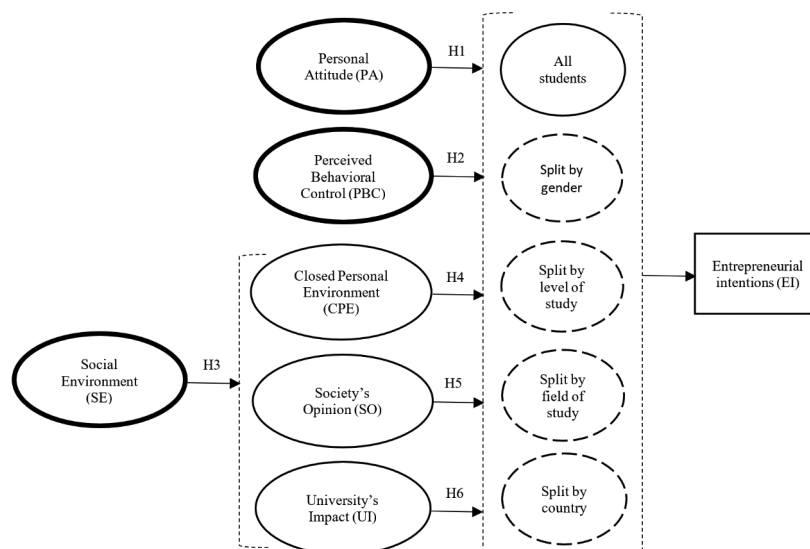


Figure 1. Modified theoretical model for measuring the impact of various variables on students' entrepreneurial intentions in the Baltic Sea region countries

applied. The linear Pearson correlation coefficient was calculated and used to reveal the direction and strength of the relationship between the two variables, expressed numerically.

The ratio between the correlation coefficient and its error (t criteria) allowed assessing the statistical reliability of the relationship: $t = R / (\sqrt{(1-r)^2} / \sqrt{(n-2)^2})$. Here, n is the sample size, which is different for the average of each variable. The value in the formula after the division sign is the error of Pearson R. The relationship between the two variables is statistically significant if the probability (p_value) of t criteria is lower than the selected accuracy, called the significance level and denoted as $\alpha = 0.05$.

The Excel CORREL function was used to determine Pearson R and T.DIST.2T ($t; n - 2$) – for the determination of p-value.

1.3. Method of research

An anonymous survey of students about their intentions to start their own business immediately after graduation or five years after graduation was conducted in the frame of GUESSS project in 2021 (Guesss, 2021). The questionnaire was designed by the project aim with well-differentiated types of questions related to the respondents' career choice intentions, university environment, personal intentions to create a new business, family background and social behaviour, plans for own business or information about running own business and finally about the parents' business. Students from higher education institutions (universities and colleges) in 58 countries took part in that survey and provided answers to the questions about their intentions to start or continue their own businesses. The link to the online questionnaire distributed special working groups, which collaborated with the administrations of Higher

Education Institutions and student unions. For participation in the survey were welcome students studying all areas at the bachelor and master level of study programs in all Higher Education Institutions in each country. The survey included nearly twelve thousand students from Estonia, Finland, Lithuania, Poland and Sweden. Despite this wide-ranging study, our research team selected a sample of only ten thousand fifty-four responses that are relevant to our research model and aim.

The questionnaire included 28 questions used in the GUESSS project survey to measure the Entrepreneurial Intention cross Baltic Sea Regions countries. Most of these questions were adapted from Liñán and Chen (2009). Two questions required to provide personal information, two questions – the data about studies, two questions required to clarify career choice intentions, six questions – intention to create a new business, five questions – personal attitude, three questions – perceived behavioural control, three questions required to describe closed personal environment, two questions – society's opinion and three questions – university's impact.

Respondents had to express their entrepreneurial intentions (the types of questions from d to h) by indicating their level of agreement or disagreement with the six statements proposed by Liñán and Chen (2009) on a 7-point scale, where "1" means "strong disagreement" and "7" – "strong agreement". For measuring the impact of society (type i) reaction, it is proposed to measure in the 7 points scale, where "1" means "very negative" and "7" – "very positive".

The voluntary response sample data about intention to start own business provided by 10,054 students studying at higher education institutions (universities and colleges) in the Baltic Sea region countries are presented in Table 1. The answers of respondents from each country are

Table 1. Distribution of the respondents by gender, level of study, the field of study and country represented, as well as the willingness to start a business immediately after graduation and 5 years after graduation (source: authors of this article)

Splitting criteria	Sample or sub-sample	Number of answers received	Share as a percentage of the total number	Would like to create their own business immediately after graduation		Would like to create their own business 5 years after graduation	
				number	percentage	number	percentage
–	All students	10 054	100	901	9	4122	41
Gender	Female	6535	65	392	6	2549	39
	Male	3519	35	493	14	1584	45
Level of study	Bachelors	7239	72	652	9	2968	41
	Masters	2312	23	277	12	1179	51
Field of study	Law, economics, or business	2916	29	292	10	1400	48
	Other fields	7138	71	571	8	2784	39
Country	EST	406	4	45	11	171	42
	LTU	2154	21	172	8	926	43
	POL	6012	60	541	9	2654	44
	SWE	388	4	23	6	97	25
	FIN	1094	11	120	11	361	33

grouped according to the following criteria: gender, level of study (bachelor vs master) and two groups of fields of study (law, economics, or business vs other fields, including arts, engineering, etc.).

The data presented in Table 1 demonstrate the unwillingness of students to engage in entrepreneurial activities on their own immediately after graduation, and this is true for each separate group analysed. In contrast to the first case, 25–45 per cent of respondents seriously consider self-employment later than 5 years after graduation. The investigation results showed that the interest of students in self-employment 5 years after graduation is significantly high.

According to the data presented in Table 1, 9 per cent of all students surveyed expressed an intention to create their own business immediately after graduation and 41 per cent – 5 years after graduation. The most significant percentage of students intending to create their own venture immediately after graduation found in Estonia and Finland – 11 per cent, and the lowest – in Sweden (6 per cent). Intentions of males are more than twice as high as females – 14 and 6 per cent, accordingly. The differences between the other sub-groups of respondents are not significant.

The number and the percentage of students intending to create their own business 5 years after graduation are much higher. The highest share of students intending to create their own business 5 years after graduation is in Poland – 44 per cent, and the lowest – in Sweden (25 per cent). More students – 49 per cent, who are studying law, economics, or business, intend to create their own business 5 years after graduation, compared to students who have chosen other fields of study (39 per cent). There is a 10-percentage point difference among the intentions to create their own business between bachelor and master students (41 versus 51 per cent) 5 years after graduation.

2. Data analysis

Data analysis was performed in two steps. In the first step hypotheses H1–H3 and in the second step – hypotheses H4–H6 were tested. Correlation analysis using Pearson R and its statistical significance testing tools we used by testing these hypotheses using various data combinations:

- a) all data received from all the respondents from all the countries were included in the survey;
- b) data of separate sub-samples split by respondents' gender, level of study and field of study regardless of the country from which the data were obtained.

When calculating the aggregated averages of all variables, the weights of all indicators mentioned above were presented by the authors of this article according to their logical importance. Analysis of the relationship of the model variables performed using Excel CORREL and T.DIST.2T (t; n–2) functions. Using these tools, we tested the H1–H6 hypotheses for all data combinations. The strength of relationships between selected variables is shown in Table 2.

A positive sign of the Pearson R index indicates a direct positive interaction of the variables we funded by analyzing all relationships. We found out that in most cases, p_value is < 0.05. There were only a few cases when statistical significance was lower than the required level. Only two relationships in the cases of Lithuania did not achieve the required statistical significance. The first one is between the variable SO and the variable EI (hypothesis H5), which reflects the influence of society on encouraging individuals to strive for continuous improvement (p_value = 0.12). The second one is between the variable UI and the variable EI, which reflects the influence of higher education institutions on students' encouragement to participate in entrepreneurial activities (p_value = 0.21). A lack of statistical significance was also observed when analyzing the relationship between UI and EI (hypothesis

Table 2. Strength of relationships, expressed by Pearson R, between selected variables analysing a sample of all students and sub-samples split by gender, level of study, the field of study and country of residence of respondents (source: authors of this article)

Splitting criteria	Sample or sub-sample	Strength of relationships expressed by Pearson R					
		H1	H2	H3	H4	H5	H6
–	All students	●●●●	●●	○	●	○	○
Gender	Females	●●●●	●●	○	●	●	○
	Males	●●●●	●●	○	●	○	○
Level of study	Bachelors	●●●●	●●	○	●	○	○
	Masters	●●●●●	●●	○	○	●	○
Field of study	Law, economics, or business	●●●●●	●●	○	●	○	○
	Other fields	●●●●	●●	○	○	○	○
Country	Estonia	●●●●●	●	○	○	○	○
	Lithuania	●●●●●	●	–	○	–	–
	Poland	●●●●	●●	○	●	○	○
	Sweden	●●●	○	–	○	○	–
	Finland	●●●●●	●	–	○	●	–

Note: ○ – 0.05–0.10; ○ – 0.10–0.20; ● – 0.20–0.30; ●● – 0.30–0.50; ●●● – 0.50–0.70; ●●●● – 0.70–0.80; ●●●●● – 0.80–0.99.

H6) in Sweden ($p_value = 0.91$) and Finland ($p_value = 0.93$). That served the relationship between variables SE and EI also not achieve the required statistical significance in all mentioned above countries.

A level of statistical significance between 95 and 99 per cent was observed in only two cases – when analyzing the relationship between variables CPE and EI (hypothesis H4) in Sweden and Finland (p_value average is 0.03 and 0.04, respectively). In all other cases, $p_value < 0.001$ of this relationship obtained regardless of the used criterion – respondents' gender, level of study (bachelor vs master), the field of study (law, economics, or business vs other fields) and country participating in the investigation.

The strength of the relationship is more interesting, measured using the Pearson R index. As we can see from Table 2, PA most significantly affected EI (hypothesis H1) when analyzing the data received from all students from all the countries surveyed. The average of the Pearson R correlation index, in this case, was 0.79 and this relationship rated as strong.

The variable PBC has less influence on EI (hypothesis H2) compared to PA, but its effect is sufficiently or moderately strong. Analyzing all respondents' responses, we found that the Pearson index average of these ratios is equal to 0.32. The average of this index was higher for males than females, but the difference between these values is only 0.02. We funded the same level difference when comparing the data received from students of law, economics or business studies and other study programs – Pearson R index averages at 0.306 and 0.323, respectively. There was no significant difference of this index in the answers provided by bachelor and master students.

The strength of the relationship between the PBC and the EI does not differ significantly in different countries. The strength of this relationship in the data from Poland was funded equally to near the average of the total population surveyed and was close to the average of the data from Estonia (Pearson R = 0.278). This relationship's lowest strength was founded by analyzing the data from Sweden (Pearson R = 0.18). Differences in the strength of this relationship were identified as less important when comparing the countries representing the Nordic and Baltic regions, as the Pearson R values very closed in Lithuania and Finland (0.237 and 0.230, respectively). In any case, the differences are not very meaningful, but worth discussing.

The strength of the relationship with the variable SE, the third element of the theoretical model on the EI (hypothesis H3), was significantly less critical than the first two variables. Analyzing this relationship in more detail, we saw significant differences not only in the strength of the relationship but also in statistical significance.

The Pearson index average of the relationship between the sub-variable CPE and the variable EI is equal to 0.20 in the case of analysis of all respondents in all countries, which means a weak relationship compared to the

variables we analyzed earlier. There were no significant differences in the values of this index in cases where we analyzed the students' answers by gender, level of study (bachelor vs master) or field of study (law, economics, or business vs other fields). We found the visible differences only by analyzing data from different countries. The most substantial relationship between CPE and EI, we observed when analyzing data from Poland. The Pearson R index, in this case, was equal to 0.22 and showed the importance of the opinion of family members, friends, and fellow students on his/her EI. The lowest value of the Pearson R index (0.087) for the strength of the relationship between CPE and EI was determined when analyzing the data from Sweden.

Near the same level of relationship strength, we saw analyzing the relationship between SO and EI (hypothesis H5). If we analyze the data of all respondents in all countries, the Pearson index average is 0.174. In contrast to the previously analyzed sub-variable, more significant differences are observed when analyzing the answers by respondent gender and level of study. SO has a more significant influence on EI for females (Pearson R index is equal to 0.202) and lower for males (Pearson R index is equal to 0.130). Differences were observed when comparing the relationship strength between the answers received from bachelor and master students – Pearson R index values are 0.157 and 0.202, respectively. A lower influence of SO on students' EI we found analyzing the data received from respondents studying law, economics, or business (Pearson R index is equal to 0.175) and even lower when analyzing the data of students studying in other fields (Pearson R index is equal to 0.155), but this difference is slight.

Analyzing data from different countries, we funded significant differences in relationship strength. The greatest impact of SO on EI, we found analyzing the data from Finland (Pearson R index is equal to 0.292), significantly lower – when analyzing the data from Estonia (Pearson R index is equal to 0.199) and Poland (Pearson R index is equal to 0.165). The relationship is statistically significant, but its strength in Sweden is almost zero (Pearson R index equals 0.083). In the case of Lithuania, the statistical significance of these relationships does not correspond to the required level, so the strength of these relationships is not future discussed.

The lowest level of strength on EI is seen when dealing with the impact of the variable UI (hypothesis H6). If we analyze all students' responses, the Pearson R index is equal to 0.120. The differences in the values of this index are not significant even if we analyze the relationship between sub-variable CPE and EI regardless of gender, level of study or field of study. The highest strength of this relationship was observed in Poland (0.184) and about twice lower in Estonia (0.100). Measures of the strength of this relationship were defined as almost zero for data collected in all the other countries. Moreover, the statistical significance of these ratios did not meet the required level for three countries – Finland, Sweden, and Lithuania.

3. Discussion

Different researchers used different variables to clarify their impact on students' EI. Analyzing the results of our study, we saw that they proved the results obtained by other researchers (Gorgievski et al., 2017; Miralles et al., 2017; Sitepu & Azhar, 2019). It is especially true when comparing the influence of the variables PA and PBC on EI regardless of the country in which the survey was conducted – Vietnam (Doanh & Bernat, 2019), South Africa (Mbuya & Schachtebeck, 2016) or different European and Asian countries such as Germany, the Netherlands, Poland, Spain, India, and Iran (Morianio et al., 2011).

This research showed that SE had a lower impact on EI compared to the impact of PA and PBC in all countries analyzed. These findings are consistent with the results obtained by Moriano et al. (2011), where the variables SE and SN differ little from each other. These researchers also suggested the most rational explanation for this phenomenon, arguing that decisions about entrepreneurial careers among younger people are mostly based on personal implications (self-efficacy or attitudes toward entrepreneurship) rather than subjective considerations or social norms (Morianio et al., 2011).

Literature suggested a discussion of how variables SE or SN affect EI. For example, Maes et al. (2014) state that PA and perceived behavior influence EI independently of SN and do not shape a person's intention to engage in entrepreneurial activities. It is clear, therefore, that we need more thorough research to find out how (directly, indirectly, or mixed) SE or SN influences EI in different countries and what is the influence of SE or SN on PA.

The results of the study proved the conclusion made by Gorgievski et al. (2017) – personal values are one of the ways in which a country's environment influences EI. However, not in all cases such influences occur through values. For these reasons, differences in the average scores between the countries need deeper investigation in the future.

We revealed differences in the strength of the variables PA, PBC, and SE on students' EI that we used in our model. Our attempts to clarify the reasons why the lowest or near the lowest values of the Pearson R index, based on the strength of all the variables used in our model, are found in analyzing the data from Sweden offered a few ideas. First, Sweden is the most economically developed country among the countries in the region under investigation. Second, students in Sweden may not feel enthusiastic about building an entrepreneurial career, and do not believe in the existence of natural opportunities to create a new business with an ample supply of jobs.

However, by analyzing data from Finland, where the strength of PA and SO influence on EI is the highest among all the countries involved in the study (Pearson R indices are 0.91 and 0.29, respectively), and the latest idea appears incorrect. Data from Finland showed that the influence of the sub-variable CPE on EI was very weak (Pearson R index is only 0.087), and the relationship of

the sub-variable UI on EI does not satisfy the necessary level of statistical significance. It means that students in Finland, compared to students in other countries in the region, feel a much stronger impact on EI from society, where individuals are encouraged to take care of society's well-being. By choosing an entrepreneurial career, Finnish students do not expect or need a positive reaction from family members, friends and fellow students and do not see any role of higher school in encouragement to be engaged in entrepreneurial activities. It is difficult to explain such a phenomenon, but one of the possible reasons for that lies in the country's historical development – Finland had to pay reparations for a long time after World War II to the former Soviet Union. The citizens of this country are likely to feel much more responsible for their country's economic and competitiveness growth and the development of entrepreneurship is seen as a measure of accelerating this process.

When analyzing students' answers about the impact of the variable PA on EI by gender of the respondent, the results differ only slightly. The average Pearson R index for males is higher than for females by just over one hundredth. The difference of the strength of the relationship for bachelor and master students and students attending law, economics, or business and other study programs.

Analyzing the strength of the relationship between the variable PA and EI in different countries of the selected region, we also observed some differences. This relationship was found near the average level in Poland. Higher Pearson R index was observed when analyzing the responses from the Baltic countries – Lithuania and Estonia. The coefficient averages of this relationship are extraordinarily strong (at about 0.83) and do not differ between the two countries. An analysis of the data from Finland and Sweden revealed a significant difference. The highest impact of variable PA on EI has been observed by analyzing the data from Finland, where the Pearson R index averaged at 0.91, but a different situation we found in Sweden, where the average of this coefficient was only 0.55, which was defined as only moderately strong.

Guerrero et al. (2008) found that the number of students intending to start their own or co-owned business within three years after graduation is near half the number of those intending to start later. In our survey, nine per cent of all students said they will start their own business now or immediately after graduation, and 41 per cent – 5 years after graduation. The lowest interest in the creation of one's own business was observed when analyzing the answers of Swedish students in both cases – immediately after graduation and 5 years after graduation. They seem to expect more remarkable success in the job market after graduation as employees than as entrepreneurs.

When discussing the reasons for the gap between entrepreneurial intentions of own business creation immediately after graduation and a few years later, it is necessary to pay attention to the time lag. Postponement of the start of business creation could be due to personal reasons such as a change in personal attitude, fear of uncertainty, risk or

failure, family creation and/or taking care of own children or old parents. In any case, a lack of knowledge on the reasons that could hinder the creation of own business still exists and needs deeper investigation in the future.

Conclusions

We conducted our research using modified Krueger's (2009) Integrated Model of Entrepreneurial Intentions based on the Theory of Planned Behavior (TPB). Taking into consideration that other researchers successfully used this model several times before, we do not doubt its suitability and the reliability of the results of research.

Nearly all hypotheses there were proved. Due to insufficient statistical significance, the hypotheses H3 (relationship between SE and EI) and H6 (relationship between UI and EI) were not proved in the case of Lithuania, Sweden, and Finland as well as the hypothesis H5 (relationship between SO and EI) in the case of Lithuania.

Variables PA and PBC had the most significant impact on the EI of students in all Baltic Sea region countries, and the strength of this impact does not depend on the student's residence country. The impact of the SE on EI was found to be less noticeable compared to the variables PA and PBC.

The decision to divide the variable SE into three sub-variables – CPE, SO and UI served the purpose. It revealed that entrepreneurial intention most strongly influenced the sub-variable CPE in all countries included in the study, especially in Poland. The sub-variable UI least influenced entrepreneurial intentions in all the countries included in the investigation, and this fact showed that it is necessary to improve the study curricula so that the students would receive the necessary knowledge and some practical experience and motivational support to start their own business.

We have not found significant differences in analyzing the impact of the variables PA and PBC on EI among Nordic and Baltic countries' students, but we revealed that in Baltic countries and Poland, the most significant impact on EI had sub-variable CPE, and in Nordic countries, especially Finland – SO.

It is concluded that differences in historical and economic development, quality of educational system, cultural and mental self-awareness, different entrepreneurial experiences and living standards had no essential impact on the entrepreneurial intention of students in all Baltic see countries included in this investigation.

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