EDUCATION VS. ENTREPRENEURSHIP – BETWEEN THEORY AND PRACTICE: THE CASE OF SMES IN POLAND

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Abstract: *The complexity of issues related to entrepreneurial activity is reflected in the discourse in the world of economic sciences that has been continuing for over 200 years. Nowadays, the development of organizational management environment is more and more extensive and, as well as in other highly developed countries, the sector of small and medium-sized enterprises in Poland plays a fundamental role in the economy. Yet, there are rising concerns towards the entrepreneurial education direction in world of science. The growing concern in the context of entrepreneurship education has caused a discourse on whether this scholar activity can affect the entrepreneurial effectiveness in practice. We conclude that the contemporary academic management papers are, in a vast majority, focused on theoretical aspects of entrepreneurship, students, granted programs and trainings, while the opinions of real entrepreneurs toward abovementioned valuable efforts are omitted. Therefore, we decided to explore practical entrepreneurial environment to address this gap. The research participants included 189 entrepreneurs (SMEs based) that had been operating continuously for minimum 20 years. We established three objectives of this paper: to analyze the relation between the individual level of education, its characteristics and entrepreneurial success; to evaluate the state educational support in real world entrepreneurial operations effectiveness; to identify educational opportunities and threats and estimate the future research trajectories in this area. Finally, the first attempt, in the world of science, was undertaken to verify whether there is a positive correlation between entrepreneurship teaching and its real effect on entrepreneurship in practice. We empirically prove that the (higher) education can be an obstacle on the path of entrepreneurial success. Additionally, conclusions establish a new perspective on the existing state of knowledge through constructing a bridge which will enable connecting academic efforts and expectations on the part of firm owners.*

Keywords: *Education, entrepreneurship, organization, management, theory.*

JEL Classification: *A20, M21.*

APA Style Citation: Janowski, A., Gonchar, O., & Yakovyshyn, R. (2023). Education vs. Entrepreneurship – Between Theory and Practice: The Case of SMEs in Poland. *E&M Economics and Management, 26*(1), 111–125. https://doi.org/10.15240/tul/001/2023-1-007

Introduction

Entrepreneurship is a source of innovation, employment, growth and economic development (Penaluna, 2018). Therefore, promoting entrepreneurship education is one of the most important policy objectives in the European Union and in the Member States (Kuratko et al., 2021). Raising the level of entrepreneurial knowledge is seen as essential in shaping mindsets as well as providing the necessary

competences to develop an entrepreneurial culture. Therefore, it becomes important that efforts in the field of entrepreneurship education are directed towards providing society with an opportunity to acquire the aforementioned competences with the highest degree of educational efficiency (Valerio et al., 2014). Therefore, academics are increasingly calling for more determined action aimed at developing theories of entrepreneurship education (Davidsson et al., 2001; Haase & Lautenschlager 2011; Low & MacMillan 1988). The validity of this appeal is still relevant in 2022 and, although evidence for a well-articulated theory is still limited, the historical foundations of entrepreneurship education theory already exist. For example, on an individual level of analysis, a decision to embark on an entrepreneurial career and an educational preparation for such a career was derived primarily from the tradition of the psychological career theory (Coetzee, 2014), derived from the assumptions of Adam Smith's human capital theory (Paganelli, 2022), which sees the possession or lack of a particular type of education as a determinant of an individuals' entry (or not) into certain occupations (e.g., women engineers) (Becker, 1964). In particular, the positive relationship between entrepreneurship education and various variables is supported by research that demonstrates that a lack of knowledge and understanding of starting a business is seen as a major obstacle to any kind of entrepreneurship (Walstad, 2018). Also, psychologists have conducted a number of different studies in order to verify whether education may "socialise" (through knowledge, skills, role-playing, role models, etc.) individuals into perceiving entrepreneurship as a career path (Burton et al., 2016). In contrast, cognitive-social career theory, promoted by Lent et al. (1994), suggests that career goals/choices are linked to self-efficacy beliefs and performance related expectations. The idea that individuals are motivated by beliefs about their own talents and abilities, followed by their belief in successful outcomes, is derived from Bandura's agency theory of human development (Yoon et al., 2019) and it supports the human ability to transcend the dictates of the immediate environment and to self-direct one's own life. The agency theory, in support of entrepreneurship education, posits that to the extent that education may shape abilities, competencies, self-regulation skills and self-efficacy beliefs, individuals will pursue a wider range of opportunities and become more effective: able to realise a desired vision of future than those with resources that are less developed through education (Bandura, 2006; Schunk & Zimmerman, 1998). Another popular theory (the theory of planned behavior), reflected in the views of Ajzen (1991), assumes that entrepreneurial behaviour is always preceded by entrepreneurial "intentions", which may theoretically be modified by educational experiences. Taking into consideration the abovementioned dichotomy and circumstances, a decision was made to empirically verify the correctness of the assumptions of the impact of state education level on entrepreneurial success, perceived as a legitimacy of the Austrian School of Economics (Von Mises, 2010). Additionally, an empirical verification of the effects of the aforementioned relation is implemented, which constructs a bridge connecting the achievements of the world of science with organizational practice and, as such, brings a contribution to economics and management science. It is the first study in Europe which analyses the entrepreneurial characteristics of those individuals who have built their organizations from the scratch, in the conditions of an environment of an economic transformation from a socialist to a capitalist system (including accession to the European Union). As a consequence, this paper aims to determine the knowledge gaps related to the effective application of a theoretical perspective into a practical environment. The authors place an emphasis on the experience of job creators and founders of SMEs (a vast majority of corporations are foreign or state owned in Poland), as they generate the majority of GDP both in Poland and in developed countries. The research results and conclusions constitute foundations for a discussion concerning significant ideas for both future educational directions in the field of entrepreneurship and management sciences researches' trajectories.

The structure of the paper is the determinant of the research aim and it consists of sections as follows. Section 1 is based on a literature review and it presents the world of science past and present entrepreneurial approaches and their impact on entrepreneurship in organizational practice. This also includes a profile of the Polish entrepreneurial and operational

environment in the context of research novelty and justification. Section 2 is focused on the research context and design, including the sources of data collection and analysis, while Section 3 is dedicated to a critical discussion of the research, a presentation of the results, conclusions as well as limitations and future research/educational suggestions.

1. Entrepreneurship Theory in the Education System

In the contemporary economic environment, the entrepreneurship and education are intersecting phenomena. Hence, in order to identify their strength and direction, it is necessary to analyze their origins, trajectory of evolution and link them to organizational aspects, to which the following section is devoted.

1.1 Evolution of Entrepreneurship as a School Subject

Echoes of the views mentioned above may be perceived in the current educational system, where entrepreneurship, as a subject, has been taught (in business schools, technical universities and universities) for more than 60 years now (Katz, 2003; Solomon, 2007; Vesper & Gartner, 1997), even becoming a mainstay of the most prestigious schools around the world (e.g., Harvard, Instead, MIT). Over those years, teaching of entrepreneurship has evolved into a field of study: entrepreneurship education (Fayolle, 2018; Frese & Gielnik, 2014; Neck & Corbett, 2018). This field of research focuses on understanding what is to be taught and how, and who entrepreneurship should be taught to (e.g., Fiet, 2001; Honig, 2004; Neck & Corbett, 2018), what outcomes should be expected from such curricula (e.g., Donnellon et al., 2014; Martin et al., 2013), and it analyses the mechanisms and factors through which entrepreneurship education influences business creation (e.g., Bischoff et al., 2020) as well as those standards that undergraduate programs should include (e.g., Katz & Green, 2021). However, as was to be expected, there are studies regarding entrepreneurship education as a research field, which question its maturity and validity (Aronsson, 2004; Fayolle et al., 2016; Fiet, 2000; Katz, 2008; Kuratko, 2005; Weaver et. al., 2006), thus promoting the emergence of a community interested in reconstructing entrepreneurship education (Landström et al., 2021).

1.2 Entrepreneurship: Academic Approaches vs. Organizational Practice

The influence of the aforementioned theories is evident in research on entrepreneurship education and educational determinants of success; however, to date, researchers have failed to prove any unified correlation course of the aforementioned theories and their practical verification. Although there are a number of scientific evidences to confirm a positive correlation between an individual's earnings and their level of education (Card, 1999), the aforementioned correlation was found among employees, while little is known about the existence of the influence mentioned above among entrepreneurs. Bill Gates, Evan Williams, Mark Zuckerberg, and Steve Jobs all dropped out of university to create some of the world's largest brands (which may indicate that higher education has become less useful for entrepreneurs), joining the previously formed line of successful entrepreneurs with little or no formal education, who are common throughout the history of capitalism (Arrow, 1962). However, in recent years, there has been a significant increase in the number of successful high-tech companies created by entrepreneurs with higher education (which may suggest a reversal of the trend): Google was founded as the result of a research project by Sergey Brin and Larry Page during their doctoral studies at Stanford, where they eventually earned their master's degrees. What is more, Michael Bloomberg (founder of Bloomberg L.P.), Scott McNealy (Sun Microsystems), hold MBA degrees, and three leading companies in the booming American biotech industry (Amgen, Gilead Sciences and Celgene) were founded by entrepreneurs with PhD degrees (Astebro & Thompson, 2011). Significantly, even Peter Thiel (one of the PayPal founders), a leading figure in the Silicon Valley who funded a scholarship program to encourage young people to skip or drop out of college to start a business, holds a PhD from Stanford Law.

1.3 The Entrepreneurship in Poland – Contemporary Market Data

In Poland, the SME sector, similarly to other highly developed countries, plays a key role in the economy. It may be concluded that it is the bloodstream of the economy because it constitutes an important source of state budget revenues, and it participates in the creation

of GDP. SMEs also create new jobs and generate the innovativeness of the economy. In terms of the size and the subject of activity, this sector is very diverse; yet, it constitutes a vast majority of organizations in Poland (Eurostat, 2022): almost 99.8%. The most numerous group (96.7%; 2.08 million) is micro-enterprises, and the share of small enterprises is 2.4% (52.7 thousand) and medium-sized enterprises constitute merely 0.7% (15.2 thousand), while large ones circa 0.2% (3.7 thousand). The analysis of the industry structure of micro, small and medium-sized enterprises indicates that the largest group are companies from the services sector (52.1%), followed by trade (23.6%) and construction (14.1%). Every tenth enterprise from the SME category (10.3%) operates in the industry sector. It is estimated that micro, small and medium-sized enterprises generate almost half of the GDP (49.8%). Micro-enterprises have the largest share in gross domestic product: 30.2%. In the context of SMEs, the service sector plays a crucial role with a share of 43.1%, followed by trade 26.5%, industry 19.0% and construction 11.3% (Eurostat, 2022). In the report entitled "Global Business Complexity Index 2021", TMF Group experts claimed that Poland is in the group of those countries (the worst ten) where the conditions for running a business are found to be among the most difficult ones (TMF, 2021). Following that statement, doing business requires from entrepreneurs the highest level of determination and consequence.

2. Research Methodology

Therefore, this study proposes to conduct research in this professional group (entrepreneurs) and to implement an inductive method in the research, as this approach is particularly useful and adequate when the conceptual base cannot determine any identifiable dimensions in a simple manner (Williamson et al., 1982). It also requires experts to proceed an analysis of a sample content, one that is based on a post hoc factor analysis (Anderson & Gebring, 1991; Kerlinger, 1986), and it also ensures a proper categorization of factors (Ford & MacCallum, 1986). Furthermore, a comparative analysis of the subject literature raises the level of the research results' validation (Eisenhardt & Graebner, 2007). The case study was constructed through the use of an iteration process, which was based on a consonance of theoretical assumptions and empirical evidence (Araujo & Dubois, 2004; Dubois & Gadde, 2002). Further, the implementation of a case study in the theory development dimension enhances inductive research through an adequate theory creation which, as a result, enables scientific progress and is testable (Gibbert & Ruigrok, 2010). The purpose of the research conducted was to identify whether any relations exist between the level and type of education and entrepreneurial success and to indicate future directions in the field.

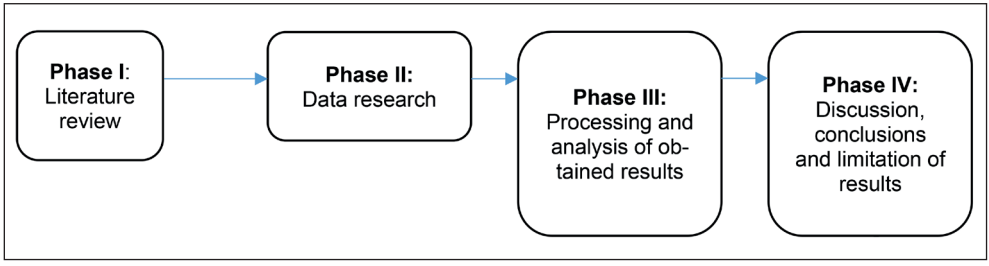
Subsequently, in order to achieve the research aim, three main research questions (*RQ*s) are established:

RQ1: Does the level of education act as a determinant of an entrepreneurial success?

RQ2: Does state education provide graduates with knowledge which supports an entrepreneurial success?

RQ3: What are the future opportunities and threats in the context of effective entrepreneurship education?

Fig. 1: Methodology in the study



Source: own

The research took place in Poland, in the period from 01/02/2021 to 30/10/2021. Its methodology was based on the stages (Figure 1).

Phase I: WOS, Scopus (via Ebsco: Academic and Business Source Ultimate) and Eurostat databases sourced papers were selected with keywords used for searching through such as: "entrepreneurship", "education", "effectiveness".

Phase II: The first task was to construct a research questionnaire, the content of which was established as a result of using the Delphi method of combined efforts by the academics of two economy and management departments from the Higher School of Business and Management, Ciechanow, Poland and from the Khmelnytskyi National University, Ukraine. As an initial round, we began with examining of 20 individuals (entrepreneurs), who agreed for the interview first to validate the test and to proceed adjustments before the main research. The participants were the members of the Masovian Chamber of Commerce, the Branch in Pulawy. For the main research, the company data was obtained from the Polish Bureau of Statistics from each of the 16 districts in Poland. Then, we contacted 12 random individuals in every district (using the RAND function in Excel to receive the number in the database) and set appointments. Finally, the research sample consisted of 189 entrepreneurs (21 women and 168 men) who met strictly defined requirements: age over 35, a self-employment status, a continuous period of running one's own business for a minimum of 20 years (this condition is extremely important, as the period of the last 20 years has been accompanied by structural changes in the Polish economy: transformation of the socialist economy into a free market one, and accession to the European Union), building an organization from its beginnings (inheritance was excluded from the study sample).The interviews with entrepreneurs were implemented by the authors directly, which made it possible to obtain the highest standards of the results' reliability. In total, 3 questionnaires were rejected, as errors in the database occurred.

Phase III: All the calculations and their results were provided with Statistica 10.0, SPSS and Microsoft Excel. The sample size was calculated on the basis of a confidence interval for the population Proportion (1):

$$P\left(\hat{p} - z_{\alpha/2}\sqrt{\frac{\hat{p}\,(1-\hat{p})}{n}} \le \pi \le \hat{p} + z_{\alpha/2}\sqrt{\frac{\hat{p}\,(1-\hat{p})}{n}}\right) = 1-\alpha \quad (1)$$

where: n – sample size; P_i – unknown population proportion; $\hat{p}$ – population proportion in a sample study; $1-\alpha$ – confidence coefficient, probability that the interval will cover an unknown population proportion; $z_{\alpha/2}$ – quantile of the $N(0;1)$ distribution.

Assuming that the admissible estimation error of the population proportion is not to exceed the set value of d [Equation (2)]:

$$z_{\alpha/2}\sqrt{\frac{\hat{p}(1-\hat{p})}{n}} \le d \quad (2)$$

and assuming $\hat{p}$ = 0.5, the minimum sample size was [Equation (3)]:

$$n \ge \frac{\left(z_{\alpha/2}\right)^2}{4d^2} \quad (3)$$

In the study, the confidence ratio was $1-\alpha$ = 0.8 and d = 0.05. In this situation, $n \ge 165$; hence, the obtained number n = 189 meets the assumptions of the maximum error in estimating the fraction, which is less than 5% with 80% probability. The participants were inquired about their level of education (in Poland, there are five possibilities: vocational school, 14.29% of the research sample; high school (16.4%); technical high school (52.91%); college (10.05%); technical college (6.35%), and:

1. The duration of their business activity (≥20 years);
2. The number of employees hired in their enterprises;
3. The compliance of the entrepreneur's education with the characteristics of one's entrepreneurial activity (an answer to the question as to whether the entrepreneur's activity is compatible with the education obtained, a 3-point Likert scale was used: 1 – none, 2 – partly, 3 – completely),

4. Its utility in an entrepreneurial career (a 7-point Likert scale was used: from 1 – proved to be an obstacle to 7 – helped perfectly). The Kruskal-Wallis and Levene's tests were implemented accordingly to evaluate and verify statistical relations in the context of 1, 2, the MLE for those described in 3, 4 and Spearman correlation coefficients (r_s).

Phase IV: This section provides a discussion, conclusions and future directions in the context of effective entrepreneurship education trajectories and practical/organizational implications.

3. Research Results

The analysis of the data implies statistical correctness: the mean level of variance is significantly different (p = 0.001, Kruskal-Wallis) and the differentiation is not (Levene's test; p = 0.6059) (Tab. 1).

A similar relationship occurs for the number of employees hired in the organisation (Tab. 2).

The analysis of the data in the Tab. 2 implies a statistical regularity: the differentiation differs significantly in the groups covered by the study (level of education), as does the differentiation (Levene's test; p = 0.0000).

Tab. 1: Level of education vs. duration of business activity

Level of education	Duration of business activity									
	Means	*N*	Std. dev.	Var.	Std. err.	Min	Max	Q25	Med.	Q75
Vocational school	28.6667	27	4.8118	23.1538	0.9260	20	40	24.0	29.0	31
High school	28.3871	31	5.3769	28.9118	0.9657	21	42	25.0	27.0	30
Technical high school	28.8300	100	5.2628	27.6981	0.5263	20	43	24.5	29.0	32
College	23.2632	19	4.2537	18.0936	0.9759	20	32	20.0	21.0	26
Technical college	25.0000	12	3.9080	15.2727	1.1281	22	35	22.0	23.5	27
All groups	27.9312	189	5.3216	28.3197	0.3871	20	43	24.0	28.0	31

Source: own

Note: $H(4, N = 189) = 24.3087$; p = 0.0001; Levene's test; p = 0.6059.

Tab. 2: Level of education vs. number of employees hired

Level of education	Number of employees hired									
	Means	*N*	Std. dev.	Var.	Std. err.	Min	Max	Q25	Med.	Q75
Vocational school	8.3333	27	5.4278	29.4620	1.0446	2	21	4.0	7	12
High school	13.0000	31	8.3026	68.9330	1.4912	1	31	5.0	14	18
Technical high school	13.9300	100	9.8209	96.4500	0.9821	2	42	5.0	12	21
College	68.7368	19	38.6851	1,496.5400	8.8750	12	136	26.0	77	94
Technical college	78.0833	12	50.1316	2,513.1740	14.4717	9	170	24.5	90	109
All groups	22.5608	189	29.1929	852.2260	2.1235	1	170	6.0	13	23

Source: own

Note: $H(4, N = 189) = 59.0888$; p = 0.0000; Levene's test; p = 0.0000.

The results obtained determine a positive response to *RQ1*. Although those holding university degrees statistically run their businesses for a shorter period of time (due to a longer time of education), on average, they employ significantly more workers ($p = 0.000$, Kruskal-Wallis) and thus they contribute to a higher extent to the creation of jobs.

To answer question *RQ2*, a comparison was made between the level of education of the entrepreneur, and:

- The compatibility of the profile of state (unpaid) education received and the characteristics of the entrepreneur's business activity – MLE test (Tab. 3);
- The respondents' opinions as to the usefulness of the aforementioned education in business, using an implementation of the MLE test (Tab. 4).

As $p < 0.05$, the relationship described between the level of state education and its compatibility with the business profile is to be considered significant, although the direction of this relationship is negative: almost 77% of the respondents stated an incompatibility of the business profile with the education received. This statement was also confirmed in the study on the existence of the statistical dependence between the education level of entrepreneurs and their opinion on the usefulness of the state education obtained in conducting business activities (Tab. 4).

None of the respondents marked the maximum level of usefulness (7), while marks 2 and 3 were given most frequently: 44.4% and 36.5% respectively, although the statistical dependence of the quantities examined is not significant ($p > 0.05$), this is also reflected in the correlation matrix (Tab. 5).

Tab. 3: Level of education vs. its compliance with entrepreneurial activity characteristics

	None	Partly	Completely	Row summary
Vocational school	18	1	8	27
High school	27	0	4	31
Technical high school	71	0	29	100
College	18	0	1	19
Technical college	11	0	1	12
Amount	145	1	43	189

Source: own

Note: MLE = 15.0223, df = 8, $p = 0.0487$.

Tab. 4: Level of education vs. its utility in entrepreneurial career*

	1	2	3	4	5	6	Row summary
Vocational school	0	9	11	2	4	1	27
High school	0	14	14	1	1	1	31
Technical high school	7	44	34	5	6	4	100
College	0	10	5	1	2	1	19
Technical college	0	7	5	0	0	0	12
Amount	7	84	69	9	13	7	189

Source: own

Note: *None of participants ranked "7"; MLE = 19.4688, df = 20, $p = 0.4916$.

Tab. 5: Correlations

Correlations	Level of education	Usefulness of state education	Duration of business activity	Number of employees hired	Compliance of education
Level of education	1				
Usefulness of state education	r_s = −0.1238 p = 0.0896	1			
Duration of business activity	r_s = −0.217 **p = 0.0027**	r_s = −0.0139 p = 0.8494	1		
Number of employees hired	r_s = 0.4707 **p = 0.0000**	r_s = −0.129 p = 0.0770	r_s = −0.2514 **p = 0.0005**	1	
Compliance of education	r_s = −0.075 p = 0.3050	r_s = 0.5042 p = 0.4908	r_s = 0.1209 p = 0.0975	r_s = −0.2525 **p = 0.0005**	1

Source: own

Note: r_s – Spearman rank coefficient.

The only positive (moderate) relationship with education is reflected in the number of employees hired by the entrepreneur.

4. Discussion

Recent studies have attempted to fill gaps in research into entrepreneurship education by, for example, exploring changes in learners' values, attitudes and intentions regarding their willingness and ability to start a business (Sommarström et al., 2021; Volery & Mueller, 2006), by implementing a metacognitive role of training, self-learning and adaptation (Bryant, 2015; Ramocki, 2007), and by identifying and suggesting the needs of different environments (students, learners, the unemployed etc.) that require an intervention of research communities in the form of suggesting the learning needs of different environments that will require learning-oriented activities, including supporting learning through experience, problem-solving, project-based creative approaches that include peer assessment that is similar to the way entrepreneurs live and learn (Brătianu & Nistoreanu, 2008; Jones & English, 2004). In parallel, there is an ongoing debate about how far entrepreneurship can be taught and, if so, in what way. On the one hand, if one accepts that the key attributes of entrepreneurship are based on personality traits (Janowski, 2018), education and training may not have any fundamental impact because they rarely change the basic personality of an individual. On the other hand, if it is assumed that entrepreneurial awareness and skills are largely acquired through experience (Neck et al., 1999), then education and training may have a significant impact on decision-making and other key aspects of entrepreneurship (Tăchiciu et al., 2010). What is more, entrepreneurship education is an exploration of the sources of opportunity and the processes of discovery where an individual pursues creativity, takes risks and puts their ideas into action (Jones & English, 2004). Some researchers have demonstrated that entrepreneurship education is training for an uncertain future that provides opportunities for business creation (Thahir et al., 2020). However, most of the literature reviewed focuses on entrepreneurship education: developing entrepreneurial attitudes, skills and managerial attributes (Co & Mitchell, 2006; Galloway et al., 2005). Therefore, entrepreneurship education can be defined as a process of applying knowledge, attitudes, skills and professional competencies. It is more than teaching students how to become independent business owners. It is about creating and maintaining a learning environment that promotes entrepreneurial qualities and behaviours such as being creative and independent thinkers, taking risks, accepting responsibility and respecting diversity (Gautam, 2020). Furthermore, Kaplan and Rauh (2013) examined the characteristics of 400 wealthiest individuals, referring to the

Forbes 400, since 1990s, and they indicated that college graduates percentage has increased from 77 to 87, which is consistent with our findings that the return to education is correlated with the number of employees hired. Yet, their research was based on corporations, while the study covered entrepreneurs perceived by Levine and Rubinstein (2017) as self-employed individuals who run their own businesses. Furthermore, Queiro (2016) claims that there is a direct proportional relation between the entrepreneur's educational level and the effectiveness of the company in the context of the terms of survival probability, profitability and growth.

The declarations mentioned above are not in line with the authors' research results, which indicate that, in the context of:

a) ***RQ1:***
   - The (technical) college education determines the number of employees hired only (Tab. 2, Tab. 5);
   - The (technical) high school is an optimal level of education in the context of gaining success as an entrepreneur in Poland (83.6% of participants in the study) – there is no necessity to graduate from college (with one exception described above).

b) ***RQ2:***
   - State education in Poland does not enable an acquisition of competences for effectively conducting economic activities: 84.6% of the respondents indicated that school effects are counter-effective or neutral at most, which confirms the previous results of the study conducted by Winarno et al. (2019) in the area of vocational schools. Moreover, also in Hill's (2022) report from the Global Entrepreneurship Monitor, the existence was confirmed of the abovementioned relationship in most of the 50 world economies using an expert method (Tab. 6).

What is particularly significant is that a number of prosperous economies scored particularly badly. Examples in Europe include France (2.89), Germany (2.83), the Russian Federation (2.77) and Poland (1.73). Examples elsewhere include Turkey (2.06), Uruguay (2.22) and Japan (2.13). Consequently, entrepreneurial education at school is typically rated poorly by national experts, both in terms of absolute scores (with eighteen economies with EES scored at half or less sufficient, i.e., scores of ≤2.5).

As the relation (Tab. 3, Tab. 5) between the compliance of education obtained and the characteristics of entrepreneurial activity is significant yet negative, in Poland, the successful entrepreneur does not follow the earlier education profile obtained (almost 77%), the answer to ***RQ2*** is positive statistically but with complete negative scientific soundness (a similar relation is observed in the context of the number of employees hired).

c) ***RQ3:***
   - The long-term consequences of poorly performing entrepreneurial education in schools are as yet unknown, but these could include: little awareness of entrepreneurship as an option among young people; young people with little understanding of how their economies work, and hence being unequipped to hold their politicians to account; an inability to appreciate the personal and financial investment required to transition anew into an established business, and hence an endless cycle of short-lived new businesses (com. Testa & Frascheri, 2015).

There is an urgent need for research that assesses the relationship between Entrepreneurial Education in school scores and other dimensions of contemporary or subsequent entrepreneurial performance. In that context, there is one particularly important issue to be discussed. Polish entrepreneurs declare that there is a harmful, or at best neutral impact of entrepreneurship state education on successful businesses, which is consistent with the majority out of 50 economies described in the Hill's report (2022). Would it be effective to implement Polish (European) academics (who had no entrepreneurial experience) into entrepreneurship education programs? The importance of the problem addressed above is consisted with the earlier studies by Testa and Frascheri (2015) conducted in high schools, Winarno et al. (2019), who placed an emphasis on vocational education; finally, Teruel-Sánchez et al. (2021) claim that training is not significant and it only explains a small part of the entrepreneur's effectiveness. In that matter, referring to Kuratko and Morris (2018), there is a need for constructing an "entrepreneurial bridge"

Tab. 6: EES indexes in 50 economies

Economy in 2021	School education and training (EES)*	Economy in 2021	School education and training (EES)*
Belarus	1.82	**Luxembourg**	3.40
Brazil	1.55	**Mexico**	2.15
Canada	4.03	**Morocco**	1.87
Chile	2.28	**Netherlands**	5.81
Colombia	3.57	**Norway**	5.41
Croatia	2.71	**Oman**	2.78
Cyprus	2.68	**Panama**	1.81
Dominican Republic	1.92	**Poland**	1.73
Egypt	2.19	**Qatar**	5.28
Finland	6.09	**Romania**	2.52
France	2.89	**Russia**	2.77
Germany	2.83	**Saudi Arabia**	3.70
Greece	2.63	**Slovak Republic**	2.76
Guatemala	2.29	**Slovenia**	2.32
Hungary	2.45	**South Africa**	2.68
India	3.77	**South Korea**	4.25
Iran	0.94	**Spain**	3.47
Ireland	3.34	**Sudan**	1.02
Israel	3.16	**Sweden**	4.07
Italy	3.15	**Switzerland**	3.62
Jamaica	3.63	**Turkey**	2.06
Japan	2.13	**United Arab Emirates**	5.73
Kazakhstan	3.50	**United Kingdom**	3.20
Latvia	4.04	**Uruguay**	2.22
Lithuania	4.74	**USA**	3.18

Source: Hill (2022)

Note: *A sufficient EES indicator should amount to 5 or more.

between practitioners and academics, in the context of increasing the level of entrepreneurship effectiveness (perceived both as an academic discipline and an economic activity). In this study, the authors confirmed the validity of this statement in real organizational environment and, as such, contributed to filling the existing gap between the theoretical and practical approaches. The (still) existing dichotomy (impasse) between academic development directions and real market expectations should be resolved through a meaningful dialogue between practicing entrepreneurs (telling their interesting stories based on practice and delving into the real problems involved with ventures) and academics. This seems to be a future challenge for the latter, but students should consult these individuals who have faced challenges and failures and their firms have survived. Such a transformation could increase both the

level of entrepreneurial activity among young people and the rate of transition from new to start-ups and, as a result, would create more jobs, incomes and encourage more individuals realizing their own entrepreneurial potential.

Conclusions

This paper is aimed to examine the real impact of the level of education and the entrepreneurial success of the individual (founder of SME). The contribution of this work covers several areas. This is the first paper in the European Union which evaluates (through direct deepened interviews) those individuals whose entrepreneurial experience has been longer than 20 years. What is also important is that the research was conducted in the period of the transition from the communist economy to the free market economy in Poland. The sample included those entrepreneurs who faced a hostile political environment and survived, which increased the level of the research reliability. Based on the research results (i.e., the participants' opinions), the authors discovered an inefficiency of academic education as a determinant of a dynamic organizational environment and educational inertia: Polish schools as well as European ones (in majority) are unable to keep pace with free market changes. Moreover, the higher level of education of the individual is, the lower probability of an entrepreneurial success rate is; the Polish school curricula are not adequately prepared to transfer entrepreneurial knowledge to students (a vast majority of teachers, despite their academic level, have a theoretical background only). It is more optimal for a potential entrepreneur to finish education on a secondary level rather than to graduate from a college, where there is a high probability (close to 1) to be taught by a teacher who does not possess any entrepreneurial knowledge or experience. Finally, the authors empirically confirmed the need described by Kuratko and Morris (2018) for a reconstruction of entrepreneurship education directions as the present ones are ineffective (Hill, 2022). Moreover, the current state of entrepreneurial education in Europe (except Scandinavian countries) determines the question whether successful entrepreneurs became what they are because they were not helped in the schools they attended or in spite of the fact that they were disturbed there. However, we confirm that further research is needed in this context.

In a practical dimension, entrepreneurship education is expected to deliver a positive impact on peoples' understanding of entrepreneurship and the willingness of individuals to engage in an entrepreneurial activity perceived as a promising and valuable career option which may lead to potential exciting outcomes. In Poland, at the present stage, university curricula are inadequate to the realities of the current business operation conditions. Therefore, there is a need for entrepreneurial education to foster a breakthrough in the current manner of transferring knowledge and to apply different and more up-to-date theoretical concepts to the real world (Neck & Corbett, 2018), and to enable its students to actively exploit opportunities that arise on the organizational horizon, that are shaped and channelled into an entrepreneurial process (Sarasvathy, 2021). To sum up, our study demonstrates that providing appropriately configured entrepreneurship education in an academic environment should be a crucial determinant of university policy, as micro, small and medium-sized enterprises generate almost half of the GDP (49.8%) in Poland. This indicates that doing entrepreneurship education in a more effective manner may have a profound impact on the country's economic development.

Limitations

When we analysed the research results of this study, it was taken into consideration that our study covered participants within a single country and context. As the ceteris paribus rule is commonly known and accepted in the world of economic sciences, we feel obliged to mention that there are regional and cross-country differences in entrepreneurial behaviour (Schrijvers et al., 2021) as well as existing law and political barriers, and their consequences for entrepreneurs. As Poland offers one of the most hostile environments for this kind of activity, the conclusions may be inconsistent and inadequate with other more entrepreneurship friendly countries. As a consequence, this study could be developed in other parts of the world in order to contrast the results and to minimize the bias of political, socioeconomic and cultural determinants. Referring to the research results, new opportunities are opened to extend this study, e.g., gender differences (in our study, only 11.17% participants were women), branch/sector ones as well as region related factors.

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