



Individual Characteristics and Cognitions of Students with Different Levels of Entrepreneurial Intensity

ABSTRACT

RESEARCH OBJECTIVE: The objective of the current paper is to verify in what way university students who declare high individual level of entrepreneurial intensity differ from those who are characterized by its intensity level.

THE RESEARCH PROBLEM AND METHODS: A statistical analysis of obtained survey results was conducted. The group of research participants included 413 business students. Following statistical methods were used to analyze the data: internal reliability test, chi-square test of independence, independent samples *t*-test.

THE PROCESS OF ARGUMENTATION: The line of reasoning presented in the current paper starts with the analysis of entrepreneurial intensity which, when measured on an individual level, is distinctive to people who declare a strong commitment to following an entrepreneurial career. Later the theoretical background including individual characteristics and cognitions that can potentially be prevalent among entrepreneurs is presented.

RESEARCH RESULTS: It was found that groups of students who display high and low levels of entrepreneurial intensity differ significantly. These differences pertain to individual characteristics (i.e. gender), the perception of business success indicators and the perception of entrepreneurs' environment favorability.

CONCLUSIONS, INNOVATIONS, AND RECOMMENDATIONS: Obtained results allow to formulate conclusions about ways in which the development of entrepreneurial attitudes can be facilitated. Several recommendations are proposed for educators and policy makers including adopting a more fine-grained approach to supporting the emergence of entrepreneurial culture in Poland.

→ **KEYWORDS:** **ENTREPRENEURSHIP, ENTREPRENEURIAL INTENSITY, NASCENT ENTREPRENEURS, ENTREPRENEURIAL INTENTIONS**

STRESZCZENIE

Indywidualne charakterystyki i przekonania studentów o różnym poziomie zaangażowania przedsiębiorczego

CEL NAUKOWY: Celem niniejszego artykułu jest weryfikacja różnic pomiędzy studentami deklarującymi wysoki oraz niski poziom zaangażowania przedsiębiorczego.

PROBLEM I METODY BADAWCZE: Dane zebrane w badaniu kwestionariuszowym zostały poddane analizie statystycznej. Uczestnikami badania było 413 studentów kierunków związanych z zarządzaniem. Do analizy danych wykorzystano: test rzetelności wewnętrznej, test niezależności chi-kwadrat, test t dla grup niezależnych.

PROCES WYWODU: Proces wywodu zaprezentowany w artykule rozpoczyna się od przeanalizowania konstruktów zaangażowania przedsiębiorczego. Charakteryzuje ono te jednostki, które deklarują silne zaangażowanie w rozwijanie kariery przedsiębiorcy. Przedstawiono także tło teoretyczne dotyczące indywidualnych charakterystyk oraz przekonań powszechnych wśród przedsiębiorców.

WYNIKI ANALIZY NAUKOWEJ: Uzyskano wyniki wskazujące na istotne różnice pomiędzy grupami studentów deklarujących wysoki i niski poziom zaangażowania przedsiębiorczego. Różnice te dotyczyły cech indywidualnych, różnic w sposobie postrzegania wskaźników sukcesu w biznesie oraz w postrzeganiu otoczenia przedsiębiorcy.

WNIOSKI, INNOWACJE, REKOMENDACJE: Uzyskane rezultaty pozwoliły sformułować wnioski dotyczące sposobów wspierania rozwoju postaw przedsiębiorczych. Zostało zaproponowanych kilka rekomendacji skierowanych do osób zajmujących się edukacją oraz decydentów mających potencjalnie duży wpływ na wspieranie rozwoju kultury przedsiębiorczej w Polsce.

→ **SŁOWA KLUCZOWE:** PRZEDSIĘBIORCZOŚĆ, ZAANGAŻOWANIE PRZEDSIĘBIORCZE, POCZĄTKUJĄCY PRZEDSIĘBIORCY, INTENCJE PRZEDSIĘBIORCZE

Introduction

Attempts to discover why certain people decide to pursue an entrepreneurial career have been made by representatives of different scientific fields. As a result our knowledge about the way in which entrepreneurs think, act and make decisions has increased significantly (Douglas & Shepherd, 2002). Universities in general and entrepreneurship faculties and departments in particular try to help students develop entrepreneurial competencies. It is believed that they can help people thrive in the increasingly complex world (Morris, Kuratko, & Cornwall, 2013). Supporting the development and growth of intentions to establish one's own venture can thus be perceived as one of the prime roles of universities (Fayolle, 2013). It should however also be noted that pursuing an entrepreneurial

career is connected with a certain level of risk. The probability that a young firm dies is substantial (Cressy, 2006). Additionally, some aspects of choosing self-employment may not always be as positive as one would expect. Hamilton for example demonstrated that becoming a paid worker is often related with higher initial earnings and their higher growth when compared to becoming an entrepreneur (Hamilton, 2000). Despite these facts there are certain people who decide to become entrepreneurs. In the current paper findings of empirical research which involved business students as study participants are presented. The importance of research involving that group has been previously emphasized by other scholars (Greblikaite, Sroka, & Gerulaitiene, 2016; Wach & Wojciechowski, 2016). It is crucial to further study students entrepreneurial cognitions in Poland where a great emphasis is placed on fostering entrepreneurial culture and where still a lot needs to be done in that domain (Łuczka & Rembiasz, 2016).

In the first step of the statistical analysis the research sample was divided into four groups depending on the individual level of entrepreneurial intensity (Liao, Murphy, & Welsch, 2005). Only two groups of students (i.e. the group with the lowest and the group with the highest scores) were later compared. Differences were found between these groups in regard to personal characteristics, the perception of business success criteria and perceptions of favorableness of the environment in which entrepreneurs operate. Obtained results add to the current understanding of the development of entrepreneurial cognitions among young people.

Theoretical background

Probably the most basic characteristic that can be related with startup activity is gender (Caliendo, Fossen, Kritikos, & Wetter, 2015). In almost every country becoming self-employed is more prevalent among men than women. Even though the gender gap has recently decreased it remains substantial worldwide (Kelley et al., 2015). Numerous explanations have been proposed in the attempt to explain this phenomenon and their detailed description is beyond the scope of the current paper. It is important however to state that they include social norms, personality, culture and barriers perception (Shinnar, Giacomini, & Janssen, 2012).

There are different reasons and motives that drive people to establish their own ventures and to remain focused and persistent when inevitable difficulties arise. These motives include for example obtaining personal satisfaction, autonomy or wealth (Zaleśkiewicz, 2004). Motives are to a large extent related with the way in which obtained outcomes are later perceived and evaluated. Those people who manage to satisfy main motives that lead them to undertake goal-oriented actions (including startup activity) are more likely to feel successful. It is important to verify the way in which business success is perceived by people who are characterized by low and high entrepreneurial intensity levels. It was found that some motives (for example the autonomy motive) can help predict company's growth (Zaleśkiewicz, 2004).

The final element that was analyzed in the current study is the perception of entrepreneurs' environment. Human behavior results from the interaction of individual traits and characteristics and the environment. The impact of its perceived favorableness should not be underestimated when entrepreneurial activities are considered. Its significance can be observed in different theoretical approaches and in the content of different variables utilized in entrepreneurial research. It is for example present in the entrepreneurial event theory (Shapero & Sokol, 1982), which, along with Ajzen's theory of planned behavior (Ajzen, 1991), is one of the most often utilized models explaining how entrepreneurial intentions are formed. One of the antecedents of their formation are perceived social norms. They have been conceptualized in entrepreneurial research in which Shapero and Sokol's model was used as a perceived presence (or a lack of) obstacles to entrepreneurship and the extent to which entrepreneurship is valued in the environment (e.g. Liñán, 2004). Such conceptualization makes the construct of social norms similar to some elements of the perceived entrepreneur's social capital. Liao & Welsch (2005) proposed that entrepreneur's social capital should be perceived as a multidimensional construct. Each of these dimensions serves different purpose in the process of venture creation and development. Elements of the social capital scale designed by Liao & Welsch (2005) can be used as an indicator of one's beliefs about the level of favorableness of the environment in which entrepreneurs operate.

Research aim, participants, method and results

Results presented in the article were obtained in a wider research project on entrepreneurial cognitions among Polish university students. The aim of the analysis presented in the current paper was to provide the answer to the following research question: What are the similarities and differences between people who declare high versus low entrepreneurial intensity in terms of personal characteristics, the perception of entrepreneur's success and the perception of entrepreneur's environment? 413 university students participated in the study and filled the research survey (262 women and 151 men). They were informed that taking part in the study was voluntary. The group of study participants included undergraduate and graduate full-time students from a business faculty of a large university situated in the north of Poland.

In the first step of the statistical analysis groups of participants declaring high versus low level of individual entrepreneurial intensity were identified. Four statements adapted from the previous conceptualization of this construct (Liao et al., 2005) were included in the survey. Two of them are presented below as examples:

1. I would rather own my own business than earn a higher salary.
2. Owning my own business is more important than spending more time with my family.

A seven-point Likert scale was used with answers ranging from 1 ("total disagreement") to 7 ("total agreement"). Statements utilized to measure entrepreneurial intensity

pertain to one's strong willingness to pursue a career of self-employment and also include an additional element of salient costs of this choice.

The Polish translation of the scale was prepared for the purpose of the research. The translation and back-translation procedure was performed. In order to verify scale's internal reliability Cronbach's alpha was calculated. It reached a satisfactory level of 0.79 and thus the single score representing the level of the declared entrepreneurial intensity was calculated for each research participant. In the subsequent step quartiles that were later used to categorize participants into high versus low entrepreneurial intensity groups were computed. Obtained results are presented in Table 1.

Table 1
Level of entrepreneurial intensity in the entire sample – statistics

Mean	Standard Deviation	Median	25th Percentile	50th Percentile	75th Percentile
3.10	1.19	3.00	2.25	3.00	4.00

In the subsequent analysis only data obtained from participants with scores lower than the 25th percentile (low entrepreneurial intensity group) and scores equal or higher than the 75th percentile was analyzed (high entrepreneurial intensity group). This was done in order to make sure that groups that differ in a relevant way are later compared. The group of people characterized by the low level of declared entrepreneurial intensity consisted of 100 participants and the group with high scores included 110 participants.

Firstly, the percentage of men and women in both groups was compared. Entrepreneurship is still more often perceived as a masculine domain in most countries and the gender gap remains substantial globally (Kelley et al., 2015). Numbers and the percentage of men and women in the entire sample and two analyzed groups are presented in Table 2.

Table 2
The number of women and men in the entire sample and two analyzed groups

Group	Number of women	Number of men	Percentage of women	Percentage of men
Entire sample	262	151	63.4%	36,6%
Low entrepreneurial intensity group	71	28	71.7%	28,3%
High entrepreneurial intensity group	55	55	50%	50%

The percentage of women and men in the low and in the high entrepreneurial intensity group differ. In order to verify if these differences are statistically significant the chi square test of independence was used. Results were significant, $\chi^2(1, 209) = 10.3, p < 0.001$, which indicates that women were less often declaring high level of individual entrepreneurial intensity when compared to men.

Research participants were presented with different indicators of business success and asked to declare to which extent they considered each of them valid. Again a 7-point

Likert scale was used with the same anchors. Two items were used to measure the autonomy motive (e.g. “becoming independent”), two statements were used to measure the recognition motive (e.g. “receiving public recognition”), two statements measured the prosocial motive related with other people’s well-being (e.g. “contributing to society”) and a single statement measured the material motive (i.e. “accumulating money an wealth”). For each of three indicators of business success that were measured using two items the internal reliability coefficients were calculated. All Cronbach’s alphas were highly satisfactory ($\alpha = 0.80$ for each). Therefore, single scores were computed for each participant. Later results of people from both studied groups were compared using independent samples *t*-tests (Table 3).

Table 3
The perception of business success by study participants from different groups

	Low entrepreneurial intensity group		High entrepreneurial intensity group		<i>t</i> -test
	M	SD	M	SD	
Autonomy motive	5.67	1.20	6.03	1.13	-2.22*
Material motive	5.07	1.60	5.15	1.43	ns
Recognition motive	5.10	1.36	5.33	1.43	ns
Prosocial motive	4.83	1.55	4.94	1.23	ns

**p* < 0.05

Only the perception of one indicator of business success meaningfully differentiated participants from both groups – the one related with the autonomy motive. The autonomy motive is of great importance to many people who decide to become entrepreneurs (Carter, Gartner, Shaver, & Gatewood, 2003). Small business owners were found to be often highly motivated by autonomy and thus it is important to put emphasis on it when measuring entrepreneurial success (van Gelderen & Jansen, 2006) social-cognitive, and leadership theories has guided hypotheses regarding the relationship between entrepreneurial traits and skill (passion, tenacity, and new resource skill. The fact that in the high entrepreneurial intensity group the obtained mean score was higher than 6.00 on a 7-point Likert scale clearly indicates that persons from that group see it as crucial benefit that may result from being successful in business.

The perception of entrepreneurs’ environment

It was also verified if two analyzed groups differ in their perception of entrepreneurs’ environment. Elements of social capital identified by Liao & Welsch (2005) were used in order to measure this variable (i.e. relational social capital and cognitive social capital subscales. They consist of statements that are indications of whether one believes

that entrepreneurs are supported by different public and commercial institutions and whether they are admired in the society and local communities. Answers were provided on the 7-point Likert scale. In the first step of the statistical analysis it was verified if it is justifiable to use a single measure of the perceived favorableness. Internal reliability coefficient was calculated for participants' respondents to all items. A highly satisfactory internal reliability level of 0.80 was obtained and thus a mean score from answers provided to these items were calculated for every participant. Mean scores of participants from low and high entrepreneurial intensity groups were compared using an independent samples *t*-test. Results and statistics are presented in Table 4.

Table 4
The favorableness of entrepreneur's environment perceived by study participants

	Low entrepreneurial intensity group		High entrepreneurial intensity group		t-test
	M	SD	M	SD	
Perceived favorableness of entrepreneur's environment	3.44	1.05	4.00	0.87	-4.16**

**p < 0.001

Results indicate that those students who declare a strong desire to pursue entrepreneurial career perceive entrepreneurs' environment as more favorable. On the other hand, it should be noted that even the mean score obtained in the high entrepreneurial intensity group was only equal to 4.00 (which is the midpoint of the 7-point Likert scale used in the current study).

Conclusion

The goal of the current paper was to present and discuss findings obtained from two groups of university students who declare noticeably different levels of entrepreneurial intensity. This study is important for several reasons. First of all, university students are about to start their professional careers in the near future and choosing self-employment is a viable option for them. Learning more about how people who seem determined to follow this career choice differ from those who don't can allow to formulate specific guidelines for policy makers and educators. The novelty of the approach presented in the current paper is related with the fact that the declared individual entrepreneurial intensity was used as a grouping variable and that only those who showed its highest and lowest levels were subsequently compared. The way in which entrepreneurial intensity is measured makes probable drawbacks of entrepreneur's career salient to study participants. These drawbacks seem to be somewhat underrepresented in the entrepreneurship discourse (Dey, 2016).

It was found that those who strongly declare their willingness to become entrepreneurs differ from those who do not in terms of individual characteristics, the perception of business success and the perception of entrepreneur's environment. There was a larger percentage of men in the high entrepreneurial intensity group than in the low intensity group. Unleashing women's entrepreneurial potential is a challenge of vital importance in many countries. It is possible that drawbacks of being self-employed which include the necessity to devote a lot of time and energy to firm's creation and development may be more dissonant with the traditional women's role when compared to the role of men. Regardless if one agrees with these socially defined gender roles or not, their significance should not be underestimated. It therefore seems that the obtained result is a call for action for educators. Examples of both successful women and men who established their ventures and different ways in which success in business can be obtained should be used during entrepreneurship courses. Additionally, students should learn how successful business people can handle disadvantages of being self-employed that can be particularly difficult to deal with by both men and women due to stereotypes prevalent in the society. Policy makers might also contribute by introducing and developing existing programs aimed at supporting the entrepreneurship of young people in general and young women in particular.

Two analyzed groups did not differ a lot in terms of how they perceive business success. Their assessment of the degree to which the material wealth, social recognition and fulfilling prosocial motives should be seen as indicators of business success were on the same level. The aspect that differentiated students from two study groups was related with the level of autonomy. High entrepreneurial intensity group saw it as a stronger indicator of business success. In fact, this motive is often presented as one of the most important benefits from becoming self-employed and at the same time the one that can help explain why people decide to enterprise even when a salary job might bring greater profits. It seems that an important goal of educators related with the obtained results is to help students discover if and how establishing one's own venture can enable the realization of different personal motives and values.

The final result presented in the article revealed that the perception of entrepreneurs' environment is more favorable in the eyes of high entrepreneurial intensity group. It seems that there is still a lot to be done by authorities who develop regulations intended to be friendly to entrepreneurs and at the same time guarantee the realization of interests important to the entire society. It can be asserted that there are important tasks also for other stakeholders including the media who decide about the way in which entrepreneurs are presented and financial institutions who create their strategies and policies that can be supportive to entrepreneurs.

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