



Economic Research-Ekonomska Istraživanja

ISSN: 1331-677X (Print) 1848-9664 (Online) Journal homepage: <http://www.tandfonline.com/loi/rero20>

Student readiness to start their own business

Marcin Waldemar Staniewski & Tomasz Szopiński

To cite this article: Marcin Waldemar Staniewski & Tomasz Szopiński (2015) Student readiness to start their own business, *Economic Research-Ekonomska Istraživanja*, 28:1, 608-619, DOI: [10.1080/1331677X.2015.1085809](https://doi.org/10.1080/1331677X.2015.1085809)

To link to this article: <http://dx.doi.org/10.1080/1331677X.2015.1085809>



© 2015 The Author(s). Published by Taylor & Francis



Published online: 29 Sep 2015.



Submit your article to this journal [↗](#)



Article views: 563



View related articles [↗](#)



View Crossmark data [↗](#)

Full Terms & Conditions of access and use can be found at
<http://www.tandfonline.com/action/journalInformation?journalCode=rero20>

Student readiness to start their own business

Marcin Waldemar Staniewski* and Tomasz Szopiński

*Faculty of Management and Finance, University of Finance and Management in Warsaw,
ul. Pawia 55, 01-030 Warsaw, Poland*

(Received 12 February 2015; accepted 19 August 2015)

Micro firms are more important in Poland than in other European Union (EU) member states because Polish micro firms represent a larger share of the total number of Polish firms and contribute more to total turnover and gross value added than EU micro firms. Polish students exhibit substantial interest in starting their own businesses. This paper presents the results of a study examining the entrepreneurial attitudes of 458 students. The goal of the study was to identify relationships between academic majors and academic programme and the extent to which students were ready to start their own business. The analysis revealed that although the choice of academic major did not influence student readiness to start a business, there was an association between academic programme and student readiness to start their own business. Respondent gender influenced the extent to which students were prepared to start their own business due to gender differences in access to business start-up financing.

Keywords: entrepreneurship education; Poland; students; entrepreneurship; readiness to start own business; gender differences

JEL classification: D03, I24, L26, M13

1. Introduction

Currently, perceptions regarding a professional career have changed, and individuals no longer base their future on a permanent relationship with a single employer even when they continue to follow the same career path (Lee & Johnston, 2001). Currently, great emphasis is placed on the self-management of one's own career and continual skill development (Anakwe, Hall, & Schor, 2000; Gysbers, Heppner, & Johnston, 1998; Hall, 1996). Because self-employment provides these opportunities, it has aroused increasing interest. Among adult Polish citizens, 22% intend to start a business compared with 13% of individuals in the European Union (Tarnawa & Zadura-Lichota, 2013). This desire is reflected in the significant increase in the number of new companies being established. In 2009, there were 349,600 newly registered business entities in Poland, the highest figure since 2000 (Ministry of Economy, 2010). In 2013, Poland ranked 45th in the world in the ease of operating a business (The World Bank, 2013).

The majority of companies in the EU (99.8%) are micro, small, and medium-sized companies (SMEs). A similar situation exists in Poland, where an overwhelming majority (99.8%) of the 1.78 million operational companies are in the SME sector; however, this sector is dominated by micro companies to a greater extent than in the EU because these firms account for a greater percentage of the total (96%) than the European average (93%).

*Corresponding author. Email: staniewski@vizja.pl

Entrepreneurship is crucial from individual, social and economic perspectives. The enterprising individual is typically considered to be an energetic, detail-oriented person who is organised and optimistic. The enterprising individual is interested in innovation and continually seeks out innovation, as well as being eager to acquire knowledge and initiate change. Thus, enterprising individuals benefit their communities because they perform different social roles and engage in activities that benefit other community members such as charitable and social activities.

Entrepreneurship is an engine for economic growth in both developed and developing countries (Audretsch, Keilbach, & Lehmann, 2006; Koellinger & Thurik, 2012; van Praag & Versloot, 2007; Van Stel, Carree, & Thurik, 2005), a remedy for unemployment, and a way to create employment (Ayyagari, Demirguc-Kunt, & Maksimovic, 2011; Hart & Oulton, 2001; Kuratko, 2005; Shane & Venkataraman, 2000; Thurik, 2003). In 2011, 6.6 million persons were employed in Poland on average, and over half of these individuals (3.9 million or 60.5%) were employed in the SME sector (Tarnawa & Zadura-Lichota, 2013). Employment created by SMEs also improves the standard of living in a country. A higher level of income among citizens ensures the economic growth of the country as a whole, and the more efficient use of human capital improves the country's competitive position in the international economy.

Business activity associated with self-employment is primarily observed in cities, although it is desperately needed in rural areas. Decision-making state authorities, educational institutions, and researchers should not ignore the large-scale benefits resulting from business activity because it provides opportunities to rural individuals, women, the disabled, and minorities.

However, newly established companies often close. Most new businesses experience difficulty surviving the initial period of operation on the market and often enter into bankruptcy or are closed by their owners. Data from the Central Statistical Office (Główny Urząd Statystyczny [GUS], 2014) indicates that only three of four businesses in Poland survive the first year of operation; in 2011, the business survival rate was 76.6%. The survival rate declines considerably in subsequent years, from 54% in the second year to 32% in the fifth year of operation (Tarnawa & Zadura-Lichota, 2013). The low survival rate of newly established companies inspired the authors to perform the research presented in this paper. Poland's legal and political conditions do not favour small and medium-sized firms. The European Commission (2014) notes that long court trials and highly complex laws create serious problems for small and medium-sized companies in Poland.

The low survival rate might also be due to inadequate preparation for establishing and operating one's own business. The present study recruited students as participants because they belong to the age group most likely to start companies (Staniewski & Szopiński, 2013).

While taking university courses, students should obtain the skills needed to apply their knowledge through the use of modern technology. Unfortunately, a widespread view holds that Polish universities do not adequately prepare students to use the knowledge they have acquired in practice. It has also often been claimed that the educational structure provided by academic majors does not meet the needs of the economy (Czapiński & Panek, 2013).

The gross enrolment ratio has increased in Poland over the past several years, from 9.8% in 1990 to 40.6% in 2011. The proportion of part-time students has also increased in recent years (Ministerstwo Nauki i Szkolnictwa Wyższego [Ministry of Science and Higher Education], 2013). Students often seek to gain professional experience while

pursuing their education because it is difficult for graduates to succeed in the labour market without experience. Consequently, they often decide to enrol in part-time rather than full-time academic programmes. Most young people who simultaneously engage in work and study (83.3%) are extramural or part-time students (GUS, 2014). Our research analysis focused on the extent to which students were prepared to establish their own businesses and the relationships between the criteria associated with business readiness and student socioeconomic characteristics, such as academic major and academic programmes. Student readiness to start a business was based on the following criteria:

- (1) Having a specific concept for the business;
- (2) Knowledge of the extent of the financial resources needed to start the business;
- (3) Possession of the funds necessary to start their own business activity; and
- (4) Knowledge of potential sources of business financing.

2. Literature review

'Entrepreneurship' is complex and controversial phenomenon (Vivarelli, 2013). An individual is typically accorded entrepreneurial status based on the ability to identify novel market opportunities (Kirzner, 1973, p. 39). From this perspective, an entrepreneur is defined as an individual whose decisions are 'sensitive' to the 'exploration' of market opportunities (Görling & Rehn, 2008, p. 95). Entrepreneurial ventures are viewed as implementations of successful ideas, and errors are attributed to deficiencies in ideas or insufficient support from the surrounding environment (Görling & Rehn, 2008, p. 96).

Business activity, as a type of entrepreneurial behaviour, involves being ready and able to make decisions, solve new problems in creative ways, take chances, seize opportunities, and flexibly adapt to a changing environment (Drucker, 1999, p. 58).

Many definitions associate innovative approaches, creativity and the ability to take risks with business activity (Dimitriadis, 2008, p. 85; Drucker, 1999, p. 58). These features, together with the ability to plan an undertaking and implement the plan in practice (i.e. to control and use resources as intended), underlie the motivation for entrepreneurship, which is referred to as the spirit of entrepreneurship.

The spirit of entrepreneurship is positively associated with the motivation to achieve goals (Collins, Hanges, & Locke, 2004). McClelland (1961) was the first to identify the 'need for achievement' as the main feature driving entrepreneurial business activity. He claimed that entrepreneurs are individuals who attach great importance to the extent to which the results of an activity depend upon their own effort rather than on other factors.

Entrepreneurial behaviour includes the basic skills and attitudes that might be stimulated by learning throughout the lifetime, with the primary criteria involving an innovative approach and creativity (Dimitriadis, 2008, p. 85).

To realise an individual's full potential, it is crucial to develop these skills and behaviours in childhood, to maintain the learning processes that begin in secondary school throughout the lifetime, and to respect the development of young students' personalities (Dimitriadis, 2008, p. 85). However, the above approach presents a serious challenge to the educational system, which might require fundamental reform because schooling is often thought to destroy independence and creativity. However, education and training in entrepreneurship is growing rapidly at universities and colleges throughout the world, and governments support this type of education (Katz, 2003; Kuratko, 2005; Martin,

McNally, & Kay, 2013). Some researchers (Galloway & Brown, 2002; Katz, 2003; Kolvereid & Moen, 1997) claim that individuals with entrepreneurship training are more likely to intend to start a business than individuals without this training and that individuals with this training are better able to identify market opportunities (DeTienne & Chandler, 2004). Acquiring broader knowledge, additional skills, and other competencies is associated with improved business achievement (Ployhart & Moliterno, 2011).

Entrepreneurship is a focus of interest in the European Union, and developing the spirit of entrepreneurship among younger individuals is a policy priority. The Lisbon Strategy, which is the fundamental document describing this issue, emphasises the importance of developing a more business-oriented culture, creating the prerequisite conditions for the development of SMEs, and providing an appropriate level of business education and training.

In simple terms, entrepreneurial behaviour can be defined as establishing one's own business. The 'Eurobarometer on Entrepreneurship 2007', a study of 20,000 young Americans and Europeans, revealed that 57% of Americans in the 15- to 24-year-old age range considered starting their own businesses compared with 51% of European Union residents, demonstrating that this type of behaviour is typical of American society. Interest in business activity is higher for 'young members' of the European Union and relatively lower (only 28%) for representatives of the 'Old Union'. The highest levels of interest are exhibited by individuals in Latvia (50%), Poland, and Lithuania (48%), whereas Austria (16%), Belgium (18%), and Germany (19%) exhibit the lowest levels of interest (MEMO/07/401, 2007).

The largest group of potential Polish entrepreneurs is formed by students from wealthy, well-educated families and cities with more than 100,000 residents. Research in Poland has found that most students plan to establish their own businesses (Banerski, Gryzik, Matusiak, Mażewska, & Stawasz, 2009; Staniewski & Szopiński, 2013) and report that they are prepared to engage in self-employment. Among these individuals, the largest group is formed by students over the age of 25 (Staniewski & Szopiński, 2013). A similar situation exists in the USA. Reynolds (1997) notes that as many as seven out of ten companies in the USA have been established by individuals between the ages of 25 and 34. Studies of the factors influencing entrepreneurial behaviour have found statistically significant associations between readiness to start a business and gender, age, academic major, and parental business activity (Staniewski & Szopiński, 2013). Men were found to be more likely to state that they were prepared to start a business, and readiness to start a business was most frequently reported by students in the humanities (e.g. political science). Students taking courses in finance and banking were the least likely to report the intention to start a business. Readiness to establish a company declined with age. Plans to engage in this type of business activity were more commonly made by individuals whose parents operated their own business or had done so in the past (Staniewski & Szopiński, 2013).

Bernat, Korpysa, and Kunasz (2008, pp. 19–20) investigated characteristics of potential Polish entrepreneurs and found that Polish university students were more likely than their counterparts in other European countries to report the intention to establish their own business immediately after graduating. Moreover, they expected a considerably shorter time period prior to making a profit, a lower frequency of expected losses and an awareness of the need for total dedication to the company.

Individuals planning to establish a business face a number of difficulties. Smith and Beasley (2011) found that factors that prevent an individual from starting a business include a lack of general business knowledge, contradictory advisory support from

external agencies, a lack of sector-specific mentors, and the lack of financial resources or experience of familial entrepreneurship. Scuotto and Morellato (2013) found that informal cooperation networks, digital competence and an innovative attitude are crucial in motivating entrepreneurial behaviour.

However, overcoming these difficulties and establishing a business does not ensure market success or long-term existence. Unfortunately, the initial period of a company's operation is the most difficult for entrepreneurs; for many, the risk is 'mortal'. Research in OECD countries has found that between 20 and 40% of new companies fail within the first two years (Bartelsman, Scarpetta, & Schivardi, 2005), and only approximately 40 to 50% survive for more than seven years (OECD, 2003, p. 145). Subsequent research in other countries has demonstrated that over 50% of enterprises go out of business within the first five years of operation (Audretsch & Mahmood, 1995; Audretsch, Santarelli, & Vivarelli, 1999; Dunne, Roberts, & Samuelson, 1988, 1989; Geroski, 1995; Johnson, 2005; Mata, Portugal, & Guimaraes, 1995; Reid, 1991). Many empirical international studies report that the most difficult period for new companies is the first four years of operation, which is termed 'death valley' (Backes-Gellner & Werner, 2003; Knaup & Piazza, 2007, pp. 3–10; Sandner, Block, & Lutz, 2008, pp. 753–777; Storey, 1994, pp. 139–150). The scale of the problem of firm survival during this critical period of operation is reflected in the available data for Polish companies. Of the 294,300 companies registered in Poland in 2008, only 97,000 (33.0% of the initial group) were still running after five years. A year-by-year analysis of survival indicators found that the fourth year of operation was the most difficult for businesses established in 2008, regardless of the firm's legal status, employment, or basic area of operation (GUS, 2014).

3. Research methodology and sample characteristics

The research on student attitudes to entrepreneurship was performed in March 2013 with an initial sample of 500 students at the University of Finance and Management in Warsaw, Poland. Data on students' level of engagement in establishing their own businesses were collected using a questionnaire designed by the authors.

The questionnaire consisted of 40 questions. Although the questions were closed-ended, it was possible to extend responses and add new options. The first 11 questions assessed respondent characteristics, such as the extent to which the respondent had experience in conducting their own business, the extent to which they had a specific idea of the type of business they wanted to operate, the source of their business idea, the extent to which they knew how much financing was required to establish the business, the extent to which they had obtained financing, the extent to which they knew how to obtain financing, and their motives for engaging in self-employment. The first survey question served as a filter to identify students who reported being prepared to establish a business. Respondents were also asked to identify their weaknesses, problems and barriers to establishing their own businesses, and factors that might hinder business operations or future business development.

The questionnaires were administered to students prior to a lecture class or a practical class, and students were given approximately 20 min to respond. Respondents were anonymous to ensure unbiased responses. Data collection was completed within one month. Subsequently, the questionnaires obtained were screened for completeness and readability. Ultimately, the analyses were based on 253 questionnaires completed by students who planned to establish their own businesses.

The participants in this research were students in their third year of study (Bachelor and Engineering degree) (equivalent to the third year of single cycle study) who were enrolled in economics and non-economics courses. Economics majors were as follows: management, finance, and banking, and the other majors were: psychology, political science, and computer science. Many students expressed interest in starting their own business; 55.24% of the respondents (52.94% of students in the economics courses and 57.09% of students in the non-economics courses) reported that they planned to establish their own business in the future.

With respect to part-time or full-time programmes, 53.61% of the part-time students reported the intention to start a business compared with 58.44% of the full-time students.

4. Results

Table 1 presents the associations between student readiness to establish a business and the respondent characteristics of student academic programme and readiness to establish a business, student major and readiness to establish a business, and student gender and readiness to establish a business. Chi-square tests were used to identify associations between the criteria indicating the extent to which students were prepared to start a business and student characteristics such as academic major and academic programme (see Table 1).

The present research investigated the extent to which students pursuing economics majors evaluated their skills in establishing a business more highly than students taking non-economics courses. Table 2 presents the associations between student major and readiness to start a business. There were no statistically significant associations between academic major and the readiness criteria of having a specific idea for the business, knowledge of the extent of the financial resources needed to start the business, possession of the necessary funding to establish the business, and knowledge of how to acquire appropriate financing.

We also analysed the influence of the academic programme on student readiness to start a business. Table 3 presents the associations between academic programme and readiness to establish a business as well as the strength of these associations. Statistically significant associations were found between:

- academic programme and having a specific idea for a business;
- academic programme and knowledge of the extent of financial resources required to start a business; and

Table 1. Associations between respondent characteristics and readiness to start a business.

Criteria for readiness to establish one's own business	Academic major	Academic programme	Gender
Having a specific idea for a business	$p > \alpha$	$p < \alpha$	$p > \alpha$
Knowledge of the extent of financial resources needed to start the business	$p > \alpha$	$p < \alpha$	$p > \alpha$
Possession of funds to start the business	$p > \alpha$	$p > \alpha$	$p < \alpha$
Knowledge of how to acquire appropriate financing	$p > \alpha$	$p < \alpha$	$p > \alpha$

Notes: For $p < \alpha$, the hypothesis of stochastic independence between the variables was rejected. For $p > \alpha$, the hypothesis of stochastic independence between variables was not rejected, and the relationship was not significant. Source: Authors' research analysis.

Table 2. Associations between academic major and readiness to start a business.

Variables	Chi-square value	Critical level of significance	Czuprow's convergence coefficient	Decision for $\alpha=0.05$
Having a specific idea for a business	0.453	0.501	Not calculated	Not significant
Knowledge of the extent of financial resources needed to start the business	0.402	0.526	Not calculated	Not significant
Possession of funds to start the business	0.175	0.676	Not calculated	Not significant
Knowledge of how to acquire appropriate financing	1.891	0.169	Not calculated	Not significant

Source: Authors' research analysis.

Table 3. Associations between respondent academic programme and readiness to start a business.

Variables	Chi-square value	Critical level of significance	Czuprow's convergence coefficient	Decision for $\alpha=0.05$
Having a specific idea for a business	5.775	0.016	0.151	Significant, weak effect
Knowledge of the extent of financial resources needed to start the business	4.693	0.030	0.136	Significant, weak effect
Possession of funds to start the business	0.007	0.934	Not calculated	Not significant
Knowledge of how to acquire appropriate financing	6.626	0.012	0.161	Significant, weak effect

Source: Authors' research analysis.

- academic programme and knowledge of how to obtain the necessary financing to establish a business.

Part-time students were more likely to report knowing the extent of funding required to establish the business. For those students who planned to start a company, 56.4% of the part-time students reported that they knew how much money they would need compared with 42.2% of full-time students; 64.4% of the part-time students reported that they had a specific idea for a business compared with 48.9% of the full-time students; and 71.2% of the part-time students reported that they knew how to search for the financing that would allow them to establish a company compared with 55.6% of the full-time students. However, none of the associations had a Czuprow's coefficient greater than 0.2, which indicated that the observed associations were weak.

There was a statistically significant association between gender and readiness to establish one's own business; 67.3% of the men reported that they planned to start a business, compared with 48.7% of the women ($\chi^2=14.705$, $p<0.0001$). However, the association was weak; T_{xy} , Czuprow's coefficient of convergence, was 0.179. When the influence of student gender on readiness to conduct a business was analysed, no statistically significant associations were found between respondent gender and

possession of the funds needed to establish the business, an idea for the business, knowledge of the extent of financing needed to establish the business, or knowledge of where to obtain financing. Table 4 presents the finding that respondent gender was differentially associated with possession of funds to establish a business.

For students who planned to establish a business, 24.6% of the men reported that they possessed the funding needed compared with 8.2% of the women. However, Czaprow's convergence coefficient was 0.224, indicating that the strength of the association was weak.

5. Discussion

It was not surprising to find that most students intended to establish their own companies. Higher levels of education increase the propensity to start a business as well as the likelihood that the newly established company will survive and exhibit better economic performance (Acs, Armington, & Zhang, 2007; Bates, 1990; Colombo & Grilli, 2010; Gimeno, Folta, Cooper, & Woo, 1997). Polish students' substantial interest in undertaking business activity is consistent with the findings of another extensive study of student entrepreneurship (Zaharia, 2009, p. 186).

In the present study, individuals enrolled in part-time academic programmes were more likely to report being ready to establish their own company; specifically, they were more likely to report a specific idea for a business, knowledge of the extent of funding needed and knowledge of where to obtain appropriate financing. In contrast, academic major (i.e., taking an economics course) did not influence the extent to which students possessed a specific idea for a business, knowledge of the extent of funding needed, the possession of the funds needed, or knowledge of where to obtain appropriate financing. However, Baptista, Lima, and Mendonca (2012) found that businesses of owners with economics or management education and industry-specific experience are more likely to survive and exhibit better sales performance. In addition to economic knowledge, other factors appeared to influence readiness to establish a business. This finding might be due to the fact that part-time students are more likely to work than full-time students and thus have more experience with employment. The findings of the present study are consistent with other research indicating that prior experience in a sector increases the propensity to start a company (Doms, Lewis, & Robb, 2010; Ghani, Kerr, & O'Connell,

Table 4. Associations between gender and readiness to start a business.

Variables	Chi-square value	Critical level of significance	Czaprow's convergence coefficient	Decision for $\alpha=0.05$
Having a specific idea for a business	1.171	0.279	Not calculated	Not significant
Knowledge of the extent of financial resources needed to start the business	0.064	0.899	Not calculated	Not significant
Possession of funds to start the business	6.567	0.010	0.224	Significant, weak effect
Knowledge of how to acquire appropriate financing	0.157	0.789	Not calculated	Significant, low

Source: Authors' research analysis.

2011; Glaeser, Kerr, & Ponzetto, 2010) and the likelihood of better performance (Goedhuys & Sleuwaegen, 2000; Vijverberg, 1991).

6. Conclusions and recommendations

Polish students exhibit a strong interest in establishing their own businesses. This result is promising and bodes well for the Polish economy. It might also serve as a signpost for other post-socialist countries. However, the current situation could be further improved if these findings capture the attention of state authorities, particularly departments of education and institutions financing and supporting business activity.

The organisations responsible for educating and training young people must provide them with opportunities to develop their interests because specific interests and passions subsequently produce innovative ideas that are implemented through the self-employment of young entrepreneurs. Thus, it is vital to introduce classes involving entrepreneurship at an early stage, and this type of coursework should be provided throughout the educational cycle. In the early stages, teaching should focus on stimulating student interests and pro-entrepreneurial attitudes. Subsequently, high schools and universities should provide students with a solid foundation in the knowledge and skills needed to establish and successfully operate a business. Merely encouraging young citizens to engage in business activity is pointless and borders on being unethical because successful entrepreneurs must possess the knowledge and skills that are needed to operate in the long term. This is the only sensible type of 'entrepreneurship' from the perspective of the individual entrepreneur and the economy as a whole. Relevant knowledge and skills should not be provided only to business or economics students but should be available to all students without regard to academic major. University courses should also provide students with relevant opportunities to enrich their business and vocational/professional experience. This task is especially important for full-time programmes because it might reduce the disparities in readiness to start a business found between full-time and part-time students.

Institutions financing and supporting business activity must take further action towards promoting entrepreneurial behaviour and cooperating more closely with universities, which naturally foster entrepreneurship and innovation.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

- Acs, Z. J., Armington, C., & Zhang, T. (2007). The determinants of new-firm survival across regional economies: The role of human capital stock and knowledge spillover. *Papers in Regional Science*, 86, 367–391.
- Anakwe, U., Hall, J., & Schor, S. (2000). Knowledge-related skills and effective career management. *International Journal of Manpower*, 21, 566–579.
- Audretsch, D. B., Keilbach, M. C., & Lehmann, E. E. (2006). *Entrepreneurship and economic growth*. Oxford: Oxford University Press.
- Audretsch, D. B., & Mahmood, T. (1995). New firm survival: New results using a hazard function. *Review of Economics and Statistics*, 77, 97–103.
- Audretsch, D. B., Santarelli, E., & Vivarelli, M. (1999). Start up size and industrial dynamics: Some evidence from Italian manufacturing. *International Journal of Industrial Organization*, 17, 965–983.

- Ayyagari, M., Demircuc-Kunt, A., & Maksimovic, V. (2011). *Small vs. Young firms across the world: Contribution to employment, job creation, and growth*. World Bank Policy Research Working Paper 5631. Washington DC: World Bank.
- Backes-Gellner, U., & Werner, A. (2003). *Entrepreneurial signalling: Success factors for innovative start-up*. Working Paper Series. Zurich: Institute for Strategy and Business Economics University of Zurich.
- Banerski, G., Gryzik, A., Matusiak, K. B., Mażewska, M., & Stawasz, E. (2009). *Przedsiębiorczość akademicka (rozwój firm spin-off, spin-out) – zapotrzebowanie na szkolenia służące jej rozwojowi. Raport z badania* [Academic entrepreneurship (Development of Spin-offs, Spin-outs) – Demand for trainings serving its development. report on a study]. Warszawa: Polska Agencja Rozwoju Przedsiębiorczości. Retrieved August 18, 2014, from <http://www.parp.gov.pl/files/74/81/305/5022.pdf>
- Baptista, R., Lima, F., & Mendonca J. (2012). *Human capital and the performance of firms over time mimeo*. SSRN. Retrieved August 18, 2014, from <http://ssrn.com/abstract=2009673> or <http://dx.doi.org/10.2139/ssrn.2009673>
- Bartelsman, E., Scarpetta, S., & Schivardi, F. (2005). Comparative analysis of firm demographics and survival: Evidence from micro-level sources in OECD countries. *Industrial and Corporate Change*, 14, 365–391.
- Bates, T. (1990). Entrepreneur human capital inputs and small business longevity. *Review of Economics and Statistics*, 72, 551–559.
- Bernat, T., Korpysa, J., & Kunasz, M. (2008). *Przedsiębiorczość studentów studiów dziennych – raport z badań* [Entrepreneurship of full-time students – report on a study]. Szczecin: Uniwersytet Szczeciński. Katedra Mikroekonomii.
- Collins, C. J., Hanges, P., & Locke, E. A. (2004). The relationship of need for achievement to entrepreneurship: A meta-analysis. *Human Performance*, 17, 95–117.
- Colombo, M. G., & Grilli, L. (2010). On growth drivers of high-tech start-ups: Exploring the role of founders' human capital and venture capital. *Journal of Business Venturing*, 25, 610–626.
- Czapiński J., & Panek T. (Eds.), (2013). *Diagnoza Społeczna 2013* [Social diagnosis 2013]. Retrieved from www.diagnoza.com, referred on October 15, 2014
- DeTienne, D. R., & Chandler, G. N. (2004). Opportunity identification and its role in the entrepreneurial classroom: A pedagogical approach and empirical test. *The Academy of Management Learning and Education*, 3, 242–257.
- Dimitriadis, D. (2008). Opinia Europejskiego Komitetu Ekonomiczno-Społecznego w sprawie: Postawy przedsiębiorcze a strategia lizbońska' [Opinion of the European economic and social committee on: Entrepreneurial attitudes versus the Lisbon strategy], *Dziennik Urzędowy Unii Europejskiej*, 2008/C 44/20.
- Doms, M., Lewis, E., & Robb, A. (2010). Local labour force education, new business characteristics, and firm performance. *Journal of Urban Economics*, 67, 61–77.
- Drucker, P. F. (1999). *Innowacje i przedsiębiorczość* [Innovation and entrepreneurship]. Warszawa: PWE.
- Dunne, T., Roberts, M. J., & Samuelson, L. (1988). Patterns of firm entry and exit in U.S. manufacturing industries. *Rand Journal of Economics*, 19, 495–515.
- Dunne, T., Roberts, M. J., & Samuelson, L. (1989). The growth and failure of US manufacturing plants. *Quarterly Journal of Economics*, 104, 671–698.
- European Commission. (2014). *Enterprise and industry. Poland. 2014 SBA fact sheet*. Retrieved November 11, 2014, from http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2014/poland_en.pdf
- Galloway, L., & Brown, W. (2002). Entrepreneurship education at university: A driver in the creation of high growth firms? *Education and Training*, 44, 398–405.
- Geroski, P. A. (1995). What do we know about entry? *International Journal of Industrial Organization*, 13, 421–440.
- Ghani, E., Kerr, W. R., & O'Connell, S. D. (2011). *Spatial determinants of entrepreneurship in India*. NBER Working Paper 17514. Cambridge Mass: NBER.
- Gimeno, J., Folta, T., Cooper, A., & Woo, C. (1997). Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. *Administrative Science Quarterly*, 42, 750–783.
- Glaeser, E., Kerr, W., & Ponzetto, G. (2010). Clusters of entrepreneurship. *Journal of Urban Economics*, 67, 150–168.

- Główny Urząd Statystyczny (GUS). (2014). *Warunki powstania i działania oraz perspektywy rozwojowe Polskich przedsiębiorstw powstałych w latach 2008-2012* [Creation and operation conditions, development prospects of Polish enterprises established in the years 2008-2012]. Retrieved December 11, 2014, from <http://stat.gov.pl/obszary-tematyczne/podmioty-gospodarcze-wyniki-finansowe/przedsiębiorstwa-niefinansowe/warunki-powstania-i-działania-oraz-perspektywy-rozwojowe-polskich-przedsiębiorstw-powstałych-w-latach-2008-2012,16,11.html>
- Goedhuys, M., & Sleuwaegen, L. (2000). Entrepreneurship and growth of entrepreneurial firms in Côte d'Ivoire. *Journal of Development Studies*, 36, 123–145.
- Görling, S., & Rehn, A. (2008). Accidental ventures—A materialist reading of opportunity and entrepreneurial potential. *Scandinavian Journal of Management*, 24, 94–102.
- Gysbers, N., Heppner, M., & Johnston, J. (1998). *Career counseling: Process, issues, and techniques*. Needham Heights: Allyn, Bacon.
- Hall, D. (1996). *The career is dead: Long live the career*. San Francisco, CA: Jossey-Bass.
- Hart, P. E., & Oulton, N. (2001). Galtonian regression, company age and job generation 1986-95. *Scottish Journal of Political Economy*, 48, 82–98.
- Johnson, P. S. (2005). Targeting firm births and economic regeneration in a lagging region. *Small Business Economics*, 24, 451–464.
- Katz, J. A. (2003). The chronology and intellectual trajectory of American entrepreneurship education 1876–1999. *Journal of Business Venturing*, 18, 283–300.
- Kirzner, I. (1973). *Competition and entrepreneurship*. Chicago, IL: University of Chicago Press.
- Knaup, A. E., & Piazza, M. C. (2007). Business employment dynamics data: Survival and longevity. *Monthly Labour Review*, September, 3–10.
- Koellinger, P., & Thurik, A. R. (2012). Entrepreneurship and the business cycle. *Review of Economics and Statistics*, 94, 1143–1156.
- Kolvereid, L., & Moen, Ø. (1997). Entrepreneurship among business graduates: Does a major in entrepreneurship make a difference? *Journal of European Industrial Training*, 21, 154–160.
- Kuratko, D. F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship Theory and Practice*, 29, 577–598.
- Lee, F., & Johnston, J. (2001). Innovation in career counseling. *Journal of Career Development*, 27, 177–185.
- Martin, B. C., McNally, J. J., & Kay, M. J. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing*, 28, 211–224.
- Mata, J., Portugal, P., & Guimaraes, P. (1995). The survival of new plants: Start-up conditions and post-entry evolution. *International Journal of Industrial Organization*, 13, 459–481.
- McClelland, D. C. (1961). *The achieving society*. Princeton, NJ: Van Nostrand.
- MEMO/07/401. (2007, October 8). Brussels. Retrieved April 11, 2009, from http://ec.europa.eu/enterprise_policy/survey/eurobarometr_intro.htm
- Ministerstwo Gospodarki [Ministry of Economy]. (2010). *Przedsiębiorczość w Polsce*, [Entrepreneurship in Poland]. Retrieved May 14, 2015, from <http://www.mg.gov.pl/files/upload/8438/Przedsiębiorczosc%20w%20Polsce%202010%20druk%20pdf.pdf>
- Ministerstwo Nauki i Szkolnictwa Wyższego [Ministry of Science and Higher Education]. (2013). *Szkolnictwo Wyższe w Polsce* [Higher education in Poland]. Retrieved May 14, 2015 from http://www.nauka.gov.pl/g2/oryginal/2013_07/0695136d37bd577c8ab03acc5c59a1f6.pdf
- OECD. (2003). *The sources of economic growth in OECD countries*. Paris: OECD.
- Ployhart, R. E., & Moliterno, T. P. (2011). Emergence of the human capital resource: A multilevel model. *Academy of Management Review*, 36, 127–150.
- Reid, G. C. (1991). Staying in business. *International Journal of Industrial Organization*, 9, 545–556.
- Reynolds, P. D. (1997). Who starts new firms? Preliminary explorations of firms-in-gestation. *Small Business Economics*, 9, 449–462.
- Sandner, P., Block, J., & Lutz, A. (2008). Determinanten des Erfolgs staatlich geförderter Existenzgründungen - eine empirische Untersuchung [Determinants of success of subsidized start-ups in Germany - an empirical analysis]. *Zeitschrift für Betriebswirtschaft*, 78, 753–777.
- Scuotto, V., & Morellato, M. (2013). Entrepreneurial knowledge and digital competence: Keys for a success of student entrepreneurship. *Journal of the Knowledge Economy*, 4, 293–303.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25, 217–226.

- Smith, K., & Beasley, M. (2011). Graduate entrepreneurs: Intentions, barriers and solutions. *Education + Training*, 53, 722–740.
- Staniewski, M., & Szopiński, T. (2013). Influence of socioeconomic factors on the entrepreneurship of Polish students. *Transformations in Business and Economics*, 12, 152–167.
- Storey, D. J. (1994). *Understanding the small business sector*. London, UK: Routledge.
- Tarnawa, A., & Zadura-Lichota, P. (Eds.). (2013). *Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2011–2012* [Report on the condition of small and medium-sized enterprises in Poland between 2011 and 2012]. Warszawa: Polska Agencja Rozwoju Przedsiębiorczości.
- The World Bank. (2013). *Doing business 2014. Understanding regulations for small and medium-size enterprises*. Retrieved July 4, 2014, from <http://www.doingbusiness.org/~media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB14-Full-Report.pdf>
- Thurik, A. R. (2003). Entrepreneurship and unemployment in the UK. *Scottish Journal of Political Economy*, 50, 264–290.
- van Praag, M. C., & Versloot, P. H. (2007). What is the value of entrepreneurship? A review of recent research. *Small Business Economics*, 29, 351–382.
- Van Stel, A. J., Carree, M., & Thurik, A. R. (2005). The effect of entrepreneurial activity on national economic growth. *Small Business Economics*, 24, 311–321.
- Vijverberg, W. (1991). Profits from self-employment: The case of Cote d'Ivoire. *World Development*, 19, 683–696.
- Vivarelli, M. (2013). Is entrepreneurship necessarily good? Microeconomic evidence from developed and developing countries. *Industrial and Corporate Change*, 22, 1453–1495.
- Zaharia, R. M. (2009). Students' entrepreneurship in post-socialist countries. *Transformations in Business and Economics*, 8, 184–186.