The Contribution of Business Experience and Knowledge to Successful Entrepreneurship

Marcin W. Staniewski, University of Finance and Management in Warsaw

March 2016

This study was part of a research project of the National Science Centre (No. UMO-2011/03/B/HS4/04038) entitled "Organizational and Psychological Predictors of Success in Business" between February and August, 2013. The author is grateful to contributions from Katarzyna Awruk, University of Finance and Management in Warsaw, and Professor Domingo Ribeiro-Soriano, University of Valencia for their careful reading and suggestions on revising this essay. Send correspondence to Marcin W. Staniewski, Faculty of Management and Finance, University of Finance and Management in Warsaw, 55 Pawia Str., 01-030 Warsaw, Poland (staniewski@vizja.pl).

Abstract

The objective of this article is to discover the relationships between selected organizational predictors and entrepreneurial success through examination of a sample of 294 companies. The study uses two questionnaires: *Multidimensional Business Data Sheet*, gathering information on the entrepreneur and the company, and *Successful Entrepreneurship Scale*, measuring entrepreneurial success. The examination involves statistical analysis with a parametric Student's t-test and a non-parametric U Mann-Whitney test. The author employs stepwise regression to verify the predictive value of variables. The findings show that entrepreneurs with managerial experience, an effective entrepreneur in the family, unique knowledge, and whose employees have unique knowledge obtain higher mean scores in the general indicator of entrepreneurial success. Furthermore, entrepreneurs whose employees have unique knowledge achieve greater entrepreneurial success. The results may help both people intending to start a business and organizations granting funds to companies as they might facilitate estimation of one's chances for success.

Keywords: entrepreneurship; entrepreneurship success; unique knowledge, managerial experience

1. Introduction

Entrepreneurship stimulates interest not only from the ruling elites, who see this phenomenon as an antidote to contemporary economic and social problems, but also from scientists whose approach to examining entrepreneurship is becoming increasingly sophisticated. Entrepreneurship also interests people seeking their own professional development as an alternative to salary-based employment and to exerting effort into accumulation of their employer's wealth. The reason behind this interest is that entrepreneurship is very beneficial from both societal and economic perspectives.

Entrepreneurship prevents unemployment (Fritsch, 2008), contributing to better application of the human capital, and stimulates the development of innovation, technology, and the economy (Mulhern, 1995).

All the benefits of entrepreneurship are the outcome of the work of the entrepreneur, who creates new enterprises, faces numerous risks and uncertainties on their way to success (Kuratko & Hodgetts, 2004), is an individualist intrinsically capable of seeing chances/possibilities on the market, and can obtain the necessary resources and take necessary actions (Makhbul, 2011; Meredith, Nelson, & Neck, 1982). For obvious reasons, such actions should lead to the success of both the entrepreneur and their company; however, due to the existence of a variety of entrepreneurs, the understanding of success also differs. One entrepreneur perceives success as, for example, higher income, whereas another entrepreneur might believe that success equals proving one's effectiveness. Evidently, not every attempt at running a business ends in success, and many newly-established companies fail within the first years of operation (Vesper, 1990).

Which predictors, then, contribute to entrepreneurial success? Extensive literature shows the importance of an array of factors (of a varied nature). However, this article focuses on knowledge-related predictors, such as knowledge and skills (of the entrepreneur/or their

relatives'/employees' experience), which (for the sake of simplification) receive a collective name: organizational predictors (at a company's disposal). Thus, the objective of this article is to discover the relationships between selected organizational predictors and entrepreneurial success.

This article contains the theoretical background section that describes entrepreneurial success from two (quantitative and qualitative) perspectives. This section also elaborates on organizational and non-organizational predictors of entrepreneurial success. The methods section presents the study sample and two author's measures. In the results section, the relationships between selected organizational factors and entrepreneurial success undergo verification. Finally, the article closes with a discussion on the results regarding current knowledge on the determinants of entrepreneurial success.

2. Theoretical background

2.1. Entrepreneurial success

Entrepreneurial success is very subjective; therefore, this phenomenon has various meanings, which depend on age (Walker & Brown, 2004), an entrepreneur's motivation behind commencing business activity, or on the formulated objectives (Rodriguez-Gutierrez, Moreno, & Tejada, 2015). Additionally, such objectives often evolve over time and change the perception of success (Camison & Cruz, 2008).

The indicators of entrepreneurial success fall into at least two categories: quantitative and qualitative (table 1). The most common quantitative factors cited by the literature are: economic/financial indicators, including profitability, productivity, or growth rate, a favorable competitive position that leads to superior and sustainable economic performance (increase or maintenance of the company's market share) (Wiklund & Shepherd, 2005), revenue, personal wealth, and turnover (Amit, MacCrimmon, Zietsma, & Oesch, 2000; Perren, 1999, 2000).

Whereas often-cited qualitative factors include the capacity for innovation, employee/customer or entrepreneur's satisfaction, and company growth (Covin, Green, & Slevin, 2006; Hill & Jones, 2011).

Table 1 here.

2.2. Success predictors

The literature widely covers the importance of various factors for entrepreneurial success (table 2). These factors belong to two groups:

- Organizational factors; features that organizations possess (i.e., entrepreneur's or company's specific internal features): age and company size, managerial and employee skills, knowledge and competences, ownership structure, etc.
- Non-organizational factors (external factors reflecting the outside conditions in which
 entrepreneurs operate; the industry, spatial and macroeconomic factors): technology,
 scale economies, entry rates, and sector growth rates, etc.

Table 2 here.

As table 2 demonstrates, these factors vary. Some contribute to achieving entrepreneurial success, while others hinder or prevent success. Furthermore, different independent authors examine various predictors of entrepreneurial success. Noticeably, numerous organizational predictors of entrepreneurial success are knowledge-related (marked in bold in table 2), such as managerial skills and competences, experience, technical knowledge, efficient management, appropriate staff training, skills and operating methods, the entrepreneur's education level, his/her parents' business, the ability to properly manage resources, human resources, and knowledge management. The most common predictors in this group are: professional experience, managerial experience and skills, educational advancement, and human capital. Some of the other predictors in table 2 are also somewhat

knowledge-related, for instance, parents' business ownership. If the entrepreneur's parents run a business, he or she may use their knowledge and experience towards personal ends.

Knowledge is one of the most important predictors of entrepreneurial success. Sources of knowledge vary: for example, personal experience and formal/informal education (Makhbul, 2011). Being knowledgeable can help an entrepreneur to be innovative and trigger new ideas, which enable entrepreneurs to seize opportunities emerging from their environment (Makhbul, 2011). Unique knowledge – specific, innovative, and difficult to acquire – is particularly precious. A high degree of uniqueness prevents migration of knowledge to other organizations, that is, the most valuable knowledge is not transferable (Staniewski, 2008).

Although fundamental individual features of an enterprise – age, education, managerial know-how, industry experience, and the owner's/manager's social skills (Cragg & King, 1988) – are organizational predictors of entrepreneurial success, these predictors are not the only ones. Numerous psychological traits (self-confidence, perseverance, autonomy, innovativeness, risk taking, proactiveness, and opportunity seeking) complement these predictors, which may contribute to achieving success (Brandstötter, 1997; Chittithaworn, Islam, Keawchana, & Yusuf, 2011; Dimitriadis, 2008, p. 85; Mahmood, Idris, & Amin, 2003; Makhbul, 2011; Rauch & Frese, 2007; Stewart & Roth, 2001; Zhang, Zyphur, Narayanann, Arvey, Chaturvedi, Avolio, Lichtenstein, & Larssen, 2009).

Literature review has led to formulating the following hypotheses:

H1: Entrepreneurs with professional experience (before staring a company) achieve greater entrepreneurial success than people with no such experience.

H2: Entrepreneurs having unique knowledge and/or employees with such knowledge are more successful than persons with no such knowledge or employees.

H3: Entrepreneurs with contacts with clients (before starting a company) or an effective entrepreneur in the family achieve greater success than persons with no such contacts.

H4: Professional experience, unique (including employees') knowledge, contacts with clients and the presence of an effective businessperson in the family have predictive value for entrepreneurial success.

3. Data and method

3.1. Study procedure and sample

The study examines entrepreneurs who set up their enterprises in Poland between 2008 and 2012 and registered in various regional and nationwide databases. A total of 1262 entrepreneurs received an invitation to participate via telephone, e-mail, or mail. The number of entrepreneurs who agreed to participate and completed questionnaires reached 345, however, analysis covered 294 responses. Incompleteness of data caused rejection of the remaining 51 responses. Trained professionals performed the survey, contacted entrepreneurs, gave them instructions for filling in the questionnaires, and collected the completed sheets.

The final research sample comprises 108 women (37%) and 186 men (63%) aged between 21 and 70 (M= 34.48, SD= 9.19). The majority of the participants (52%) were residents of large cities (population over 100,000). Among the respondents, 53% received higher education, 37% secondary education, and 9% vocational education. Entrepreneurs below the age of 23 comprise 15% of the sample, between 24 and 29 - 38%, between 30 and 39 - 32%, between 40 and 49 - 11%, and above 50 - 3%. The sample includes persons previously active on the labor market (employed as salary-earning workers -28% or on the basis of civil law contracts -25%) and unemployed ones (30%). The majority of the respondents were the sole owners of the businesses they managed (87%); overall, they were

not experienced in either running their own company at the moment of establishing a business (78%) or in managing a company (66%).

Out of 294 participants, the majority ran their businesses in the Masovian district (62.6%), Lublin (14.6%), and Łódź (4.4%). Over half of the surveyed enterprises were operating locally (53%). Usually, starting a business required low registered capital: 60% of the enterprises had to provide no more than PLN 20,000. The remaining companies needed greater financial outlays (PLN 20,001-50,000 – 22%; PLN 50,001-100,000 – 11%; PLN 100,001-500,000 – 5%; and over PLN 100,000 – 2%). Forty-one percent of companies enjoyed an increase in annual turnover (in comparison to the turnover recorded in the previous year) while 38% – suffered loss in annual turnover. Approximately 21% of entrepreneurs had no information about the annual turnover. Sales Performance in the previous year ranged: 0-10% for 45% of companies; 15% indicated 11-20% sales performance; and 9% – over 20% sales performance. Eleven percent of the businesses were loss-making and 20% had no information on sales performance. The majority of the participants used their own money (79.9%) and EU funds as financial sources to start their businesses (28.9%). Later, they used their own money (89%) and credits (22%) to run the businesses.

3.2. Methods

The study employed two measures:

The Multidimensional Business Data Sheet (MBDS) is a 31-item measure that contains items referring to the date of commencement of a business; voivodeship (company headquarters); owner status before commencement of a business; type of business according to the Central Statistical Office; financial capital; operating range, etc. However, this study only uses the items associated with professional/management experience, knowledge (post-

graduate courses, professional trainings, unique knowledge, experience of entrepreneurs, and valuable/unique employee knowledge) and social relationships (customer relations, a successful entrepreneur in the family). Sample items include: "Did you take any post-graduate courses?", "Did you have any experience in running a business before you started your own business?".

The Successful Entrepreneurship Scale (SES) is a 7-item measure developed for this study. The scale serves to evaluate entrepreneurial success understood as a compilation of various indices of successful entrepreneurship that often appear in the literature (survival, annual turnover, profitability, maintaining liquidity, competitiveness, innovativeness, and chances for future business development). SES allows assessment of the general indicator of entrepreneurial success, which contains objective (e.g., survival, turnover, and profitability) and subjective questions (e.g., innovativeness and competitiveness). Samples of questions are as follows: "Do you maintain financial liquidity?", "How do you evaluate the level of competitiveness of your company compared to other firms?". The sum of the points for each test item constitutes the total score. Non-diagnostic responses (i.e., "I do not know", "I do not have such information") receive no points. The range of possible points is between 6 and 30 – as the score increases, the intensity of entrepreneurial success rises.

3.3. Data analysis methods

Relationships between selected organizational factors and entrepreneurial success underwent verification through comparison of mean scores in the general indicator of entrepreneurial success in 10 groups:

- 1. Entrepreneur's experience in company management vs. lack of experience
- Entrepreneur's professional experience specific to the current business vs. lack of experience

- 3. Entrepreneur's experience in running their own company vs. lack of experience
- 4. An effective entrepreneur in the family vs. no such entrepreneur
- 5. Entrepreneur's contacts with clients (prior to starting a business) vs. no such contacts
- 6. Entrepreneur's unique knowledge vs. no such knowledge
- 7. Entrepreneur's postgraduate degree vs. no such degree
- 8. Entrepreneur's participation in specialist trainings vs. no participation
- Unique education/professional experience among the entrepreneur's <u>employees</u> vs. no such education/experience
- 10. Unique knowledge among the entrepreneur's <u>employees</u> vs. no such knowledge

 The author performed statistical analyses (with SPSS 22.0) with the parametric

 Student's t-test (if distribution was normal and the groups equinumerous) and the nonparametric U Mann-Whitney test (if groups were not equinumerous).

Stepwise regression served to verify the predictive value of the variables. The dependent variable introduced into the regression model was entrepreneurial success (operationalized as scores in the general indicator of entrepreneurial success), whereas the independent variables were:

- 1) Experience: professional experience in company management / specific to the current business / of employees, experience in running one's own business;
- 2) Knowledge: entrepreneur's possession of a postgraduate degree and/or participation in trainings, enterpriser's and employee unique knowledge;
- 3) Social networks: contacts with clients and an effective entrepreneur in the family.

4. Results

The first stage of the analysis involves checking the distribution of the results in the Successful Entrepreneurship Scale. Thus, estimations encompass the following descriptive statistics: the arithmetic mean, standard deviation, median, kurtosis, skewness, the minimum, and the maximum. As table 3 shows, the distribution of the scores in the *Successful*Entrepreneurship Scale is close to the normal one – the values of skewness and kurtosis that do not exceed 1 indicate so.

Table 3 here.

The obtained results demonstrate statistically significant differences in mean scores in the general indicator of entrepreneurial success among people who have:

- 1) Professional experience in company management (the first group of comparisons) which supports hypothesis H1;
- 2) Unique knowledge (the sixth group of comparisons) and/or employees with such knowledge (the tenth group of comparisons) which confirms hypothesis H2;
- 3) An effective entrepreneur in the family (the fourth group of comparisons).

The results partially support hypothesis H3 (in contrast to having an effective entrepreneur in the family, having contacts with clients does not significantly diversify the mean scores in the *SES*).

In other words, entrepreneurs who have professional experience in company management, an effective entrepreneur in the family, unique knowledge, and employees with such knowledge obtain **higher** mean scores in the general indicator of entrepreneurial success than the group without these attributes. The remaining differences are statistically insignificant (tables 4 and 5).

Table 4 here.

Table 5 here.

The results obtained from regression indicate that only one knowledge-related variable

– unique employee knowledge – has predictive power for entrepreneurial success (and, thus, can enter the regression model). In other words, entrepreneurs whose employees have unique

knowledge achieve greater entrepreneurial success. This finding partially confirms hypothesis H4: out of the variables under examination (i.e., professional experience, unique – including employee – knowledge, contacts with clients, and an effective entrepreneur in the family), only unique employee knowledge turns out to be a predictor of entrepreneurial success. Table 6 illustrates the results.

Table 6 here.

The author performs regression for men (F=6.15; p \leq 0.05) extracting the same predictor (unique employee knowledge). Interestingly, in the case of women, only professional experience of employees (F=5.03; p \leq 0.05) has predictive value. Similarly, when regression examines young (up to 32 years old) and old (above 32) entrepreneurs separately (the median divides the groups), unique employee knowledge turns out to be the best predictor of entrepreneurial success in the young group (F=4.89; p \leq 0.05). None of the analyzed factors is a significant predictor in the old group.

5. Discussion and conclusions

The findings of previous research (e.g., Lin, 2008; Rose, Kumar, & Yen, 2006; Rodriguez-Gutierrez, Moreno, & Tejada, 2015) suggest the significance of numerous variables determining entrepreneurial success. Analysis of the significance of experience- and knowledge-related factors attracts considerable attention, which shows that such variables as experience (Cragg & King, 1988; Pfeiffer & Reize, 2000; Saridakis, Mole, & Storey, 2008) and/or unique entrepreneur or employee knowledge (personal creativity, trainings, courses, studies, etc.) (Huck & McEwen, 1991; Makhbul, 2011; Staniewski, 2008; Yusof & Aspinwall, 1999) might account for prediction of entrepreneurial success. The present findings seem to support previous results by demonstrating the importance of unique knowledge, entrepreneur's managerial experience, and an effective entrepreneur in the family.

These factors substantially diversify the groups under examination in this study, whereas unique employee knowledge is the only significant predictor of entrepreneurial success. Research by Ployhart and Moliterno (2011), which reveals higher effectiveness of individuals or groups with greater knowledge, skills, and competences compared to the ones having a lower level of knowledge, skills, and competences, partially supports these results. In this context, the measures of human capital may include educational advancement, professional experience, upbringing by entrepreneurial parents, and other life experiences (Ployhart & Moliterno, 2011). Other researchers (Makhbul, 2011; Rose et al., 2006) also stress the importance of the above-mentioned predictions of entrepreneurial success.

Similarly, a rich body of literature that shows the importance of human capital for the effectiveness of an enterprise (Staniewski, 2008) confirms this study's results demonstrating the predictive value of unique employee knowledge for entrepreneurial success. As various researchers (Schuler & Jackson, 1999; Staniewski, 2008) indicate, unique employee knowledge serves to develop key competences and may, therefore, be the fundamental internal source of competitive advantage of each company.

The findings of the present study may be a precious indicator for people planning to start or already running a business and looking forward to improving competitiveness. These results are also useful for organizations granting funds for commencement or development of business activity.

A noteworthy fact is that this study adopts an innovative approach to measuring (the intensity) of entrepreneurial success. Previous studies focuse exclusively on either objective or subjective indicators of entrepreneurial success (separately). The present study adopts a multidimensional indicator of entrepreneurial success combining both objective and subjective indicators, which is undoubtedly an innovative approach. The recommendation for future research is to further improve this indicator. One of this study's limitations is a new

approach to entrepreneurial success in terms of quantitative variables, which requires further verification.

References

- Agarwal, R., & Audretsch, D. B. (2001). Does entry size matter? The impact of the life cycle and technology on firm survival. *The Journal of Industrial Economics*, 49(1), 21–43.
- Amit, R., MacCrimmon, K., Zietsma, C., & Oesch, J. (2000). Does money matter? Wealth attainment as the motive for initiating growth-oriented technology ventures. *Journal of Business Venturing*, 16(2), 119 143.
- Audretsch, D. B. & Mahmood, T. (1994). The rate of hazard confronting new firms and plants in U.S. manufacturing. *Review of Industrial Organization*, *9*(1), 41–56.
- Bosma, N., van Praag, C. M., & de Wit, G. (2000). *Determinants of Successful Entrepreneurship. RESEARCH REPORT 0002/E*. Amsterdam: Scientific Analysis of Entrepreneurship and SMEs, pp. 3-42.
- Box, M. (2008). The death of firms: Exploring the effects of environment and birth cohort on firm survival in Sweden. *Small Business Economics*, *31*(4), 379–393.
- Brandstőtter, H. (1997). Becoming an Entrepreneur a Question of Personality Structure?

 **Journal of Economic Psychology, 18, 157-177.
- Caliendo, M., & Kritikos, A. S. (2008). Is Entrepreneurial Success Predictable? An Ex-Ante Analysis of the Character-Based Approach. *Kyklos*, *61*(2), 189–214.
- Camisón, C., & Cruz, S. (2008). La medición del desempeño organizativo desde una perspective estratégica: creación de un instrumento de medida. *Revista Europea de Dirección y Economía de la Empresa, 17*(1), 79-102.
- Carrier, C., Raymond, L., & Eltaief, A. (2004). Cyberentrepreneurship: A multiple case study.

 *International Journal of Entrepreneurial Behavior & Research, 10(5), 349 363.
- Caves, R. E. (1998). Industrial organization and new findings on the turnover and mobility of firms. *Journal of Economic Literature*, *36*(4), 1947–1982.

- Chittithaworn, C., Islam, M. A., Keawchana, T., & Yusuf, D. H. M. (2011). Factors affecting business success of small & medium enterprises (SMEs) in Thailand. *Asian Social Science*, 7(5), 180-190.
- Cooper, A. C, Gimeno-Gascon, F. J, & Woo, C. Y. (1994). Initial human and financial capital as predictors of new venture performance. *Journal of Business Venturing*, 9(5), 371–395.
- Covin, J. G., Green, K. M., & Slevin, D. P. (2006). Strategic process effects on the entrepreneurial orientation-sales growth rate relationship. *Entrepreneurship Theory* and *Practice*, 30(1), 57-81.
- Cragg, P. B., & King, M. (1988). Organizational Characteristics and Small Firms' Performance Revisited. *Entrepreneurship Theory and Practice*, *13*(2), 49–64.
- Dafna, K. (2008). Managerial performance and business success: Gender differences in Canadian and Israeli entrepreneurs. *Journal of Enterprising Communities: People and Places in the Global Economy*, 2(4), 300 331.
- 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 Demeanor and the Lisbon Strategy], Official Journal of the European Union, 2008/C 44/20.
- Disney, R., Haskel, J., & Heden, Y. (2003). Entry, exit and establishment survival in UK manufacturing. *The Journal of Industrial Economics*, 51(1), 91–112.
- Duchesneau, D., & W. Gartner. (1990). A profile of new venture success and failure in an emerging industry. *Journal of Business Venturing*, 5(5), 297-312.
- Falck, O. (2007). Survival chances of new businesses: Do regional conditions matter? *Applied Economics*, 39(16–18), 2039–2048.

- Fried, H. O., & Tauer, L. W. (2015). An entrepreneur performance index. *Journal of Productivity Analysis*, 44, 69-77.
- Fritsch, M. (2008). How does new business formation affect regional development? Introduction to the special issue. *Small Business Economics*, 30(1), 1–14.
- Fu, T., Ke, M., & Huang, Y. (2002). Capital growth, financing source and profitability of small businesses: evidence from Taiwan small enterprises. *Small Business Economics*, 18(4), 257–267.
- Geroski, P. A., Mata, J., & Portugal, P. (2010). Founding conditions and the survival of new firms. *Strategic Management Journal*, *31*, 510–529.
- Gimeno, J., Folta, T. B., Cooper, A. C., & Woo, C. Y. (1997). Survival of the fittest?

 Entrepreneurial human capital and the persistence of underperforming firms.

 Administrative Science Quarterly, 42(4), 750–783.
- Girma, S., Gorg, H., & Strobl, E. (2007). The effects of government grants on plant survival:

 A micro-econometric analysis. *International Journal of Industrial Organization*,
 25(4), 701-720.
- Gurley-Calvez, T., & Bruce, D. (2008). Do tax cuts promote entrepreneurial longevity?

 National Tax Journal, 61(2), 225–250.
- Hansen, H., Rand, J. & Tarp, F. (2009). Enterprise growth and survival in Vietnam: Does government support matter? *The Journal of Development Studies*, 45(7), 1048–1069.
- Hill, C., & Jones, G. (2011). Administración Estratégica. Un Enfoque Integrado, 9th ed. Bogotá: Cengage.
- Hodgetts, R. M., & Kuratko, D. F. (1992). *Effective Small Business Management*, 4th ed. San Diego, FL: Harcourt Brace Jovanovich.

- Huck, J. F., & McEwen, T. (1991). Competencies needed for small business success perceptions of Jamaican entrepreneurs. *Journal of Small Business Management*, 29(4), 90-93.
- Jensen, P. H., Webster, E., & Buddelmeyer, H. (2008). Innovation, Technological Conditions and New Firm Survival. *Economic Record*, 84(267), 434-448.
- Jong, J. P. J., & Hartog, D. N. D. (2007). How leaders influence employees' innovative behavior. *European Journal of Innovation Management*, 10(1), 41 64.
- Kessler, A. (2007). Success factors for new businesses in Austria and the Czech Republic. *Entrepreneurship and regional development*, 19(5), 381-403.
- Kofi, Q., & Cho, Y. (1989). Determinants of minority business formation and survival: an empirical assessment. *Journal of Small Business Management*, 27(3), 56-61.
- Kristiansen, S., Furuholt, B., & Wahid, F. (2003). Internet cafe entrepreneurs: pioneers in information dissemination in Indonesia. *The International Journal of Entrepreneurship and Innovation*, 4(4), 251-263.
- Kuratko, D. F., & Hodgetts, R. M. (2004). *Entrepreneurship: Theory, Process & Practice*.

 Mason, OH: South-Western Publishers.
- Lin, C. (1998). Success Factors of Small and Medium-Sized Enterprises in Taiwan: An Analysis of Cases. *Journal of Small Business Management*, 36 (4), 43-56.
- Mahmood, R., Idris, M., & Amin, M. (2003). Bank managers' perception of the characteristics of successful entrepreneurs. *Malaysian Management Review*, 38(1), 10-14.
- Makhbul, Z. M. (2011). Entrepreneurial Success: An Exploratory Study among Entrepreneurs. *International Journal of Business and Management*, 6(1), 116-125.
- Manjon-Antolin, M. C., & Arauzo-Carod, J.-M. (2008). Firm survival: Methods and evidence. *Empirica*, 35(1), 1-24.

- Mata, J., & Portugal, P. (1994). Life duration of new firms. *Journal of Industrial Economics*, 42(3), 227–245.
- Mata, J., & Portugal, P. (2002). The survival of new domestic and foreign-owned firms. Strategic Management Journal, 23(4): 323–343.
- McCartan-Quinn, D., & Carson, D. (2003). Issues which impact upon marketing in the small firm. *Small Business Economics*, 21(2), 201–213.
- Meredith, G. G., Nelson, R.E., & Neck, P. A. (1982). *The Practice of Entrepreneurship*. Geneva: International Labour Office.
- Mulhern, A. (1995). The SMEs Sector in Europe: A Broad Perspective. *Journal of Small Business Management*, 33(3), 83.
- Perren, L. (1999). Factors in the growth of micro-enterprises: Developing a framework.

 **Journal of Small Business and Enterprise Development, 6(4), 366 385.
- Perren, L. (2000). Factors in the growth of micro-enterprise: Exploring the implications.

 *Journal of Small Business and Enterprise Development, 7(1), 58 68.
- Pfeiffer, F., & Reize, F. (2000). Business start-ups by the unemployed—an econometric analysis based on firm data. *Labour Economics*, 7(5), 629–663.
- Ployhart, R. E, & Moliterno, T. P. (2011). Emergence of the human capital resource: a multilevel model. *Academy of Management Review 36*(1), 127-150.
- Rauch, A., & Frese, M. (2007). Let's Put the Person Back into Entrepreneurship Research: A Meta-Analysis on the Relationship Between Business Owners' Personality Traits, Business Creation, and Business Success. *European Journal of Work and Organizational Psychology* 16(4), 353–385.
- Reid, G. C., & Smith, J. (2000). What makes a new business start-up successful? *Small Business Economics*, 14(3), 165–182.

- Rodríguez-Gutiérrez, M. J., Moreno, P, & Tejada, P. (2015). Entrepreneurial orientation and performance of SMEs in the services industry. *Journal of Organizational Change Management*, 28(2), 194 212.
- Rose, R. Kumar, N., & Yen, L. (2006). Entrepreneurs Success Factors and Escalation of Small and Medium-Sized Enterprises in Malaysia. *Journal of Social Sciences*, 2(3), 74-80.
- Saridakis, G., Mole, K., & Storey, D. J. (2008). New small firm survival in England. *Empirica*, 35(1), 25–39.
- Schuler, R. S., & Jackson, S. E. (1999). Strategic human resource management. Oxford: Blackwell Publishing.
- Sebora, T. C., Lee, S. M., & Sukasame, N. (2009). Critical success factors for e-commerce entrepreneurship: an empirical study of Thailand. *Small Business Economics*, 32(3), 303–316.
- Smallbone, D. (1990). Success and failure in new business start-ups. *International Small Business Journal*, 8, 34-47.
- Staniewski, M. (2008). Zarządzanie zasobami ludzkimi a zarządzanie wiedzą w przedsiębiorstwie [Human Resources Management and Knowledge Management in the Enterprise]. Warszawa: Vizja Press & IT.
- Stewart, W. H., & Roth, P. L. (2001). Risk Propensity Differences between Entrepreneurs and Managers: A Meta-Analytic Review. *Journal of Applied Psychology*, 86, 145–153.
- Sullivan, D. M., & Meek, W. R. (2012). Gender and entrepreneurship: a review and process model. *Journal of Managerial Psychology*, 27(5), 428 458.
- Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3), 341–358.

- Vesper, K. H. (1990). New Venture Strategies. 2nd ed. Englewood Cliffs, NJ: Prentice Hall.
- Walker, E., & Brown, A., (2004), What Success Factors are Important to Small Business

 Owners. *International Small Business Journal*, 22(6), 577-594.
- Wijewardena, H, & De Zoysa, A. (2005). A Factor Analytic Study of the Determinants of Success in Manufacturing SMEs. 35th EISB Conference-Sustaining the Entrepreneurial Spirit over Time, Barcelona, Spain, 12-14 September, 2005.
- Wijewardena, H., & Cooray, S. (1996). Factors contributing to the growth of small manufacturing firms: perceptions on Japanese owner/managers. *Journal of Enterprising Culture*, 4(4), 351-361.
- Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing*, 20(1), 71-91.
- Youndt, M. A., Snell, S. A., Dean, J. W., & Lepak, D. P. (1996). Human resource management, manufacturing strategy and firm performance. *Academy of Management Journal*, 39(4), 836–866.
- Yusof, S., & Aspinwall, E. (1999). Critical Success Factors for Total Quality Management Implementation in Small and Medium Enterprises. *Total Quality Management*, 10(4-5), 803-809.
- Yusuf, A. (1995). Critical success factors for small business: perceptions of South Pacific entrepreneurs. *Journal of Small Business Management*, 33(2), 68-73.
- Zhang, Z., Zyphur, M. J., Narayanann, J., Arvey, R. D, Chaturvedi, S., Avolio, B. J., Lichtenstein, P., & Larssen, G. (2009). The Genetic Basis of Entrepreneurship: Effects of Gender and Personality. *Organizational Behavior and Human Decision Processes*, 110, 93-107.

Table 1. Chosen indicators of entrepreneurial success

Indicator of entrepreneurial success	Authors	Year
Revenue, firm growth, personal wealth creation, profitability, sustainability, turnover	Perren Amit et al.	1999 2000
Employment growth, rate of return, productivity	Reid & Smith	2000
Profits, employment, duration	Bosma, van Praag, & de Wit	2000
Profits	Fu, Ke, & Huang	2002
Creation of employment and financial assets, profits, turnover	McCartan-Quinn, & Carson	2003
Financial and non-financial criteria (personal satisfaction and achievements, pride in the job and a flexible lifestyle)	Walker & Brown	2004
Self-evaluation indicator of satisfaction with one's own enterprise	Kessler	2007
Number of employees	Caliendo & Kritikos	2008
Growth rate, sales volume, business stability, customer acceptance, overall satisfaction of the entrepreneur	Sebora, Lee, & Sukasame	2009
Profitability, growth, firm size	Unger, Rauch, Frese, & Rosenbusch	2011
Firm survival, growth in sales, income, and staff members	Sullivan & Meek	2012
Earnings, firm size, firm growth, survival	Fried & Tauer	2015

probability		
-------------	--	--

Table 2. Chosen determinants of entrepreneurial success

Organizational determinants of entrepreneurial success	Authors	Year	
Age, education, managerial know-how, industry experience, and owner's/manager's social skills	Cragg & King	1988	
Experience at work	Pfeiffer & Reize	2000	
Company's age and size	Mata & Portugal Agarwal & Audretsch Manjon-Antolin & Arauzo-Carod	1994 2001 2008	
Managerial skills and competences, experience	Saridakis, Mole, & Storey	2008	
Entrepreneurial parents	Duchesneau & Gartner	1990	
Capital, revenue-generating ability	Smallbone	1990	
Technical knowledge and customer relations	Huck & McEwen	1991	
Technical skills	Hodgetts & Kuratko	1992	
Ownership structure	Mata & Portugal	1994	
Initial stocks of financial and human capital	Cooper, Gimeno-Gascon, &Woo	1994	
Education and prior experience in business	Yusuf Wijewardena & Cooray	1995 1996	

	Youndt, Snell, Dean, & Lepak	1996	
Human capital	Gimeno, Folta, Cooper, & Woo	1997	
	Mata & Portugal	2002	
Entrepreneur's management skills,			
customer focus, resource creation, soft	Lin	1998	
attitudes, skills, and operating methods			
Management leadership, measuring			
result, progress and performance,		4000	
appropriate staff training, quality	Yusof &Aspinwall	1999	
assurance system			
Financial flexibility	Kristiansen, Furuholt, & Wahid	2003	
Support from others (financial,			
technology, strategic partnerships,	Carrier, Raymond, & Eltaief	2004	
industrial contacts)			
Customer orientation, product quality,			
efficient management, supportive	W 1 0.7	2005	
environment, capital accessibility,	Wijewardena & Zoysa	2005	
marketing strategy			
Managerial experience, ownership	Janean Waheter & Duddalmayor	2008	
structure, and capital constraints	Jensen, Webster, & Buddelmeyer	2008	
Entrepreneur's education level, work			
experience, business ownership by	Rose et al.	2006	
parents			
T 1 1'	Jong & Hartog	2007	
Leadership	Dafna	2008	

Explicit and implicit knowledge, experience, managerial skills, human capital, knowledge management Knowledge	Staniewski Makhbul	2008
Innovation capabilities, intellectual property, human resources , organizational capital	Rodriguez-Gutierrez, Moreno, & Tejada	2015
Non-organizational determinants of entrepreneurial success	Authors	Year
Technology, scale economies, entry rates, and sector growth rates	Agarwal & Audretsch	2001
Business cycle	Caves	1998
Multiple birth cohorts of firms	Box	2008
Industry growth	Disney, Haskel, & Heden	2003
Spatial and geographical factors	Falck	2007
Government policies (government grant provision)	Girma, Gorg, & Strobl	2007
Marginal tax rates	Gurley-Calvez & Bruce	2008
Government policies (direct government assistance)	Hansen, Rand, & Tarp	2009
Macroeconomic and social factors related to the general business environment (e.g., infrastructure, technology, human and social capital, etc.).	Rodriguez-Gutierrez, Moreno, & Tejada	2015

Market structure or the number of		
companies comprising a firm, their size,		
the size of their demand, product		
differentiation degree, concentration level,		
or entry barriers		
Overall state of the economy, competitive		
environment (market concentration and	Geroski, Mata, & Portugal	2010
entry)		

Table 3. Descriptive statistics for the SES scores

	M	SD	Me	Skewness	Kurtosis	Minimum	Maximum
Entrepreneurial	18.11	4.45	18.5	-0.28	-0.68	7	27
success_SES							

^{*}M – mean, SD – standard deviation; Me – median

Table 4. Differences in entrepreneurial success mean scores in various groups (values of Student's t-test)

	Professio	nal experience i	in company man	nagement			
	YE	S	NO N=195		t	t P	
	N=9	99					
	M	SD	M	SD			
	18.95	4.34	17.68	4.45	2.33	0.021	
	Professional	experience spec	cific for the curr	ent business			
	YE	S	N	1O			
	N=1	86	N=				
	M	SD	M	SD			
	18.12	4.43	18.09	4.50	0.08	0.940	
	En	nployees' profes	ssional experien	ce			
Entrepreneurial	YE	S	N	1O			
success	N=1	15	N=				
	M	SD	M	SD			
	18.92	4.52	17.83	4.38	-1.89	0.059	
	Ef	fective entrepre	neur in the fam	ily			
	YE	S	NO				
	N=172 N=122						
	M	SD	M	SD			
	18.62	4.42	17.39	4.40	2.34	0.020	

Table 5. Differences in entrepreneurial success mean scores in various groups (values of U Mann-Whitney test)

	Experience in run	ning own business		
	YES	NO	Z	P
	N=66		_	
	Average rank	Average rank		
	158.64	144.28	-1.21	0.226
	Unique emplo	yee knowledge		
	YES	NO		
	N=200	N=40		
	Average rank	Average rank		
	149.00	141.80	-2.85	0.004
	Postgraduate education			
Entuaryananial	YES	NO		
Entrepreneurial	N=56	N=238		
success	Average rank	Average rank		
	146.69	147.69	-0.08	0.936
	Specialist	trainings		
	YES	NO		
	N=98	N=196		
	Average rank	Average rank		
	143.76	149.37	-0.54	0.592
	Entrepreneur's u	nique knowledge		

YES	NO		
N=86	N=208		
Average rank	Average rank		
166.48	139.65	-2.47	0.014
Contacts v			
YES	NO		
N=207	N=87		
Average rank	Average rank		
151.30	138.47	-1.18	0.236

Table 6. Proportional contribution of each independent variable to variance in scores in the *SES*

Summary of regression of the dependent variable: Entrepreneurial success $F{=}\;8.65\;p{=}0.004$							
Independent variable	R	R ²	Adjusted R ²	В	Beta	t	P
Unique employee knowledge	0.19	0.04	0.03	2.52	0.19	2.94	0.004