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Does masculine orientation affect entrepreneurial intentions? Empirical research results among students

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ABSTRACT

Objective: The article aims to present the research results on the relationship between the national culture dimension of masculinity/femininity according to Hosfstede's approach and declared entrepreneurial intentions.

Research Design & Methods: The research sample included 226 Polish students, whom we asked questions relating to Hofstede's dimensions of culture. In the next step, we created binomial logistic regression models. We verified the hypothesis based on the models' estimated parameters in the next step.

Findings: The study revealed that people representing a masculine cultural orientation tend to be more inclined to start their own businesses than those with a feminine orientation.

Implications & Recommendations: The research results confirmed that the characteristics attributed to male culture favour the emergence and development of entrepreneurial intentions. Thus, from the education perspective aimed at promoting pro-entrepreneurial behaviour, it is advisable to develop these qualities in society by emphasizing the educational process on the training of creative leaders, people with high mental resilience, and a willingness to compete and improve the surrounding world.

Contribution & Value Added: This article fills the research gap in the cultural determinants of entrepreneurial development, subject to the need to continue research on a more extensive research sample in terms of international comparisons.

Article type: research article

Keywords: entrepreneurial intentions; Hofstede; entrepreneurial determinants; masculinity; femininity; entrepreneurship education

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INTRODUCTION

Entrepreneurship is essential to a country's economic development determinant and growth (*e.g.,* Audretsch & Keilbach, 2004; Fritsch & Mueller, 2004; Stam & van Stel, 2009; Olaison & Sorensen, 2014; Khalilov & Yi, 2021; Gomes & Ferreira, 2022). Therefore, considering the notably dynamic nature of the economic changes that are taking place on a global scale, it becomes justifiable to emphasise the process of supporting entrepreneurship, considering the unique role of education (Duong *et al.*, 2022).

One of the most critical issues addressed in the literature relates to psycho-cognitive dimensions. They include the problem of human cognition and the knowledge generation about the environment and its use in behaviour, including economic ones. Entrepreneurial intentions expressed through a perceived inclination to launch business ventures are extensively explored in the literature. Thus far, researchers have mainly focused on the issues related to analysing key competencies in running a business or influencing whether a person wants to start a business. Therefore, verifying whether individuals' cultural dimension is significant in the emergence and fostering of entrepreneurial intentions seems vital.

The article's main aim is to verify the existence of a relationship between masculine and feminine cultural perceptions, as examined by the variables proposed by Hofstede, and the propensity expressed by the surveyed students to start a business shortly. For that purpose, we surveyed a sample of 226 students studying at the Krakow University of Economics, attempting to relate the cultural dimension proposed by Hofstede to their declared entrepreneurial intentions.

The undertaken subject matter is part of the current research on entrepreneurship education, which pays special attention to the fact that a comprehensive educational process aims to form appropriate entrepreneurial attitudes. Moreover, the article fills a research gap in the field of entrepreneurship and simultaneously responds to Schlaegel and Koenig (2014) who pointed out that a deeper consideration of cultural values is essential in the study of entrepreneurial intentions. The contribution of our study is an in-depth examination of the relationship between entrepreneurial intention and masculine and feminine cultures that strengthen or weaken entrepreneurial initiative.

The article consists of a theoretical part and an empirical part. In the theoretical part based on critical literature analysis, we will present a relationship between Hofstede's masculine and feminine cultures and prospective entrepreneurial intentions. Finally, we will formulate a research hypothesis which was tested in the empirical part of the article. Our results are based on the primary data obtained from the survey.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

National culture encompasses the joint norms, values, beliefs, behaviours, and roles occurring among members of a particular community living in a particular geographic region during the same time (Triandis, 1995). In the literature, one can find many studies referring to the national culture dimensions proposed by Hofstede (2001), which in his understanding, refers to the collective mental programming that distinguishes members of one group or category of people from others. Hofstede's concept is the most prominent and most frequently cited scientific framework for research on the impact of culture on the achievements of individuals, societies, organizations or states (Szymura-Tyc & Kucia, 2016). The distinctive features of culture defined in this way are the values that are passed across generations in society, resulting in the formation of appropriate attitudes and behavioural patterns (Hayton &Cacciotti, 2013; Wardana, *et al.*, 2021; Wach & Wojciechowski, 2016).

It should be noted that Hofstede's concept of dimensions of national culture is quite often used in studies on the impact of culture on entrepreneurship (*e.g.*, Morris, Davis, & Allen, 1994; Thomas & Mueller, 2000; Hayton, George, & Zahra, 2002; Wach, 2015). Some researchers believe cultural aspects can influence higher entrepreneurial intentions, but this influence is rarely direct (Nikoaev, Boudreaux, & Palich, 2017). Indeed, as Naqvi and Siddinqui (2020) point out, this regularity does not necessarily occur in every cultural context. Some researchers such as Bogatyreva, Edelman, Manolova, Osiyevskyy and Shirokova (2019) argue that the national cultures popularized by Hofstede encompass a total of six dimensions: (1) individualism/collectivism, (2) power distance, (3) uncertainty avoidance, (4) masculinity/femininity, (5) long-term/short-term orientation, and (6) indulgence/restraint, may affect entrepreneurial intentions. It is especially noticeable in the case of masculine cultures (Radziszewska, 2014; Newbery, Lean, Moizer, & Haddoud, 2018), which focus on competition and success. The case is different in female-oriented societies, where attitudes about caring and concern for others are cultivated (Al-Alawi & Alkhodari 2016). In highly masculinized cultures, relatively high competition, assertiveness among communities, ambition, and power aspiration can be observed. On the other hand, in feminist cultures, the focus is on relationships and quality of life (Czerwonka, 2015).

Empirical evidence from some studies indicates that pro-entrepreneurial individuals are characterized by a high degree of masculinity (McGarth, MacMillan, & Scheinberg, 1992). Based on a group of 13 countries characterizing different cultural backgrounds, McGarth, MacMillan and Scheinberg (1992) showed that the surveyed entrepreneurs characterized traits typical of a masculine orientation, while non-entrepreneurs were more feminine. Although the studies mentioned above did not provide clear conclusions regarding the overall cultural differences between entrepreneurs in different countries, it was noted that highly masculinized cultures manifest more significant tendencies to start their own ventures.

Bogatyreva, Edelman, Manolova, Osiyevskyy, and Shirokova (2019) argue that this is primarily driven by a high-results orientation in masculine cultures, which forms proactive strategies and increases the willingness of such individuals to seize opportunities and engage in entrepreneurial activities. On the other hand, in a study by Rubio-Bañón and Esteban-Lloret (2016), who compared the masculinity index with the number of male and female entrepreneurs, the collected research material disallowed the demonstration of an unambiguous relationship between masculinity and entrepreneurial intentions. It turned out that although the percentage of female entrepreneurs does not correspond to changes in the masculinity index between different countries, the researchers observed a significantly higher percentage among male-oriented entrepreneurs. Even in countries with low masculinity indexes, men seem to be a larger group in percentage terms among entrepreneurs (Rubio-Bañón & Esteban-Lloret, 2016). Similarly, in their study, Mueller and Thomas (2001) report that masculine orientation has little effect on individuals' entrepreneurial tendencies. Their study primarily points out the low significance of masculine and feminine orientation. According to them, the other dimensions of culture are much more significant when examining entrepreneurial inclinations among individuals.

On the contrary, while investigating the survey results of IBM, Shane (1993) initially assumed that masculinized societies would be more innovative than feminist societies. However, it turned out that the variable describing masculinity had no explanatory power. Thus, the researcher could not interpret the results and determine whether masculine orientation impacts entrepreneurship among men and women. The higher entrepreneurial intentions in masculinized societies are because, in such cultures, individuals willing to invest their efforts in generating potentially higher incomes are rewarded (Rusu, 2014). It may happen because a higher propensity for risk characterizes masculine-oriented countries.

On the other hand, Çelikkol, Kitapçi, and Doven (2019) explain the results of a negative relationship between masculinity and entrepreneurship in, among other things, the customers' awareness in terms of products, services, market, prices, and competition. They also expect quality, sensitivity, and care in customer relations, which are feminine values.

Given that the results of previous scientific research have not provided clear-cut answers in the context of the role of masculine and feminine cultures in entrepreneurial intentions, we decided to verify the following hypothesis:

H: Individuals representing masculine perceptions demonstrate higher entrepreneurial intentions.

Based on the above considerations, an empirical study verifying the above hypothesis was carried out in the later stages of the work.

RESEARCH METHODOLOGY

Sample and Data Collection

The study adopted a post-positivist approach characteristic of quantitative research. Our analysis was based on primary data from a survey of 226 students studying in Poland (Table 1). More than half of the respondents were women (64.6%), while 35.4% of the sample were men. The survey was conducted in January 2023. The survey form included questions relating to each of Hofstede's dimensions of culture, and for this article, a thread relating to one dimension of culture was included: masculinity vs femininity.

Variables in the Analysis

We included one dependent variable in the study, which related to entrepreneurial intentions, *i.e.*, students' declarations to start their own business in the nearby future (question: Would you consider starting your own business after graduation or while studying?). The proposed variable was in line with Turker and Selcuk (2009). The dependent variable was dichotomous, so if the answer to the question presented above was affirmative then the number 1 was assigned, otherwise the number 0.

Table 1. Students' profile

Category	Frequency	Percentage
Gender		
Male	80	35.4%
Female	146	64.6%
Form of studies		
Full-time	206	91.2%
Part-time	20	8.8%
Family patterns		
Yes	162	71.7%
No	64	28.3%

Source: own elaboration in PQStat.

Among the independent variables, two variables were specified: masculinity and femininity. Regarding the first independent variable, its value was calculated based on the arithmetic mean of three questions measured by a five-point Likert scale, namely: (1) 'I consider myself to be an assertive person and always express my opinion firmly, even when others are being silent,' (2) 'I love to compete with other people (co-workers, peers, etc.) – it makes me feel better (I feel strength and energy),' and (3) 'when assigning tasks, I don't follow dislike for the person, but rely on objective considerations.' On the other hand, with regard to the variable describing femininity, the following questions were detailed: (1) 'I consider that sometimes it is worth not reacting to the provocations (*e.g.*, verbal) of other people – sometimes it is necessary to keep silent about the matter,' (2) 'I do not like to compete with other people, as it wastes my time and energy,' and (3) 'when assigning tasks, I follow my sympathy for the given person, and do not rely on objective considerations.'

The study also included three control variables: *gender*, a *form of study*, and *family patterns* (question: Have any of your relatives – e.g., partner/partner, parents, siblings, grandparents, uncles, cousins – been in the past or are currently involved in business activity?). The variable describing *gender* was measured dichotomously, so a number 1 was assigned if a man answered and a number 0 if it was a woman. It is because men tend to show a higher propensity to start businesses than women, which corresponds to studies by other researchers (*e.g.* Zhang, Duysters, & Cloodt, 2014; Díaz-García & Jiménez-Moreno, 2010). Regarding the *form of study*, the variable is also dichotomous. Hence, if the respondent indicated that they were studying full-time, then the number 1 was assigned, whilst if they were studying part-time, then the number 0 was assigned. It is in line with Sandhu, Jain, and Yusof (2010). The last control variable referred to *family patterns* regarding relatives' business activities; if the surveyed student answered affirmatively that any of his/her relatives conduct/conducted business, then a number 1 was assigned, otherwise a number 0. It is in line with Bigos and Michalik (2020).

Research Model and Statistical Tests

Inference in this study was based on the results of the estimated parameters of binomial logistic regression, which applies to variables expressed on a weak scale. The reliability of the created models was verified through two statistical tests: (1) the likelihood ratio test (desired statistical significance) and (2) the Hosmer-Lemeshow test (desired lack of statistical significance). In addition, Pseudo *R*-square coefficients were calculated by Cox-Snell and Negelkerke methods. Due to the weak scale of variables used, *V*-Cramer coefficients were calculated to verify the interdependence between the variables used in this analysis. The proposed research model is presented in Figure 1.

Figure 1. Proposed research model
Source: own elaboration.

RESULTS AND DISCUSSION

We verified the hypothesis based on the parameter estimation results in the econometric models presented in Table 3. We measured their reliability using the likelihood ratio test and the Hosmer-Lemeshow test. In all models created, the likelihood ratio test was statistically significant (model 1: chi-square=12.926, p<0.01; model 2: chi-square=28.810, p<0.001; model 3: chi-square=28.236, p<0.001; model 4: chi-square=18. 067, p<0.001), while the Hosmer-Lemeshow test showed a statistical insignificance (model 1: chi-square=0.667, p=0.955; model 2: chi-square=8.194, p=0.415; model 3: chi-square=11.525, p=0.174; model 4: chi-square=4.239, p=0.835). In the Akeike Information Criterion context, model 3 exhibited a better fit, while model 1 was a relatively worse match.

A Pseudo R-square, measured by Negelkerke and Cox-Snell methods, was also calculated for the created binomial logistic regression models (Blomstermo, Deo Sharma, & Sallis, 2006; Smith & McKenna, 2013). For the first econometric model, Negelkerke's Pseudo *R*-square was 0.077, while Cox-Snell's Pseudo *R*-square was 0.056. Higher values were observed for models 2-4, where Negelkerke's Pseudo *R*-square was 0.165, 0.162, 0.106, respectively, while Cox-Snell's Pseudo *R*-square was 0.120, 0.118, 0.077, respectively (Table 3).

Table 2. *V*-Cramer coefficient

Variable	1	2	3	4	5	6
1. Entrepreneurial intentions	1	–	–	–	–	–
2. Gender	**0.155***	1	–	–	–	–
3. Form of study	0.065	0.003	1	–	–	–
4. Family patterns	**0.177****	0.096	0.046	1	–	–
5. Masculinity	**0.314****	0.257	**0.281***	0.157	1	–
6. Femininity	0.269	0.232	0.169	0.156	**0.271*****	1

Note: Significant codes: + p<0.1, * p<0.05, ** p<0.01, ***p<0.001
Source: own elaboration in PQStat.

Since the variables used in the analysis are expressed on a weak scale, the *V*-Cramer coefficient was calculated (Table 2). We could observe that relatively speaking, the *entrepreneurial intentions* and *masculinity* variables were related to each other to the highest degree (v=0.314, p<0.01). To a slightly lower degree, *form of study,* and *masculinity* (v=0.281, p<0.05) and *masculinity* and *femininity* (v=0.271, p<0.001) were related. *Gender* and *form of study* are associated with each other to the relatively lowest degree (v=0.003, p<0.001).

Based on the estimated parameters in all econometric models, it can be observed that *family patterns* was statistically significant among the control variables, while *gender* was in model 1. Based on this, it can be concluded that conducting business activity in the past and currently by relatives promotes higher entrepreneurial intentions (slightly more than twice often). However, in the context of *gender* in the first model, it can be noted that men manifested almost twice the

propensity to start a business than women; nevertheless, in the following regression models, the estimated parameter demonstrates statistical insignificance.

Table 3. The list of estimated models (odd ratios)

Variable	Model 1	Model 2	Model 3	Model 4
const.	1.548 (0.562)	0.319 (1.369)	**0.142*** **(0.857)**	**8.317*** **(0.950)**
Gender	**1.942*** **(0.314)**	1.544 (0.328)	1.574 (0.327)	1.784 (0.319)
Form of study	0.535 (0.554)	0.495 (0.580)	0.504 (0.575)	0.489 (0.568)
Family patterns	**2.178**** **(0.309)**	**2.125*** **(0.323)**	**2.145*** **(0.322)**	**2.131*** **(0.313)**
Masculinity	–	**2.023***** **(0.220)**	**2.152***** **(0.204)**	–
Femininity	–	0.825 (0.256)	–	**0.595*** **(0.235)**
Likelihood ratio test	*12.926***	*28.810****	*28.236****	*18.067****
Hosmer-Lemeshow test	*0.667* *(p=0.955)*	*8.194* *(p=0.415)*	*11.525* *(p=0.174)*	*4.239* *(p=0.835)*
Akaike Information Criterion	*285.596*	*273.712*	*272.286*	*282.455*
Pseudo R-square (Negelkerke)	*0.077*	*0.165*	*0.162*	*0.106*
Pseudo R-square (Cox-Snell)	*0.056*	*0.120*	*0.118*	*0.077*
N	*226*	*226*	*226*	*226*

Note: Significant codes: * p<0.05, ** p<0.01, ***p<0.001. Standard error in parentheses.
Source: own study.

We observed that entrepreneurial intentions occurred on average twice more often among those respondents who represented a masculine orientation according to the Hofstede approach (model 2: odd ratio=2.023, p<0.001; model 3: odd ratio=2.152, p<0.001). Thus, based on this, the research hypothesis that individuals representing masculine perceptions manifest higher entrepreneurial intentions can be confirmed. In addition, based on the estimated values in model 4, it can be concluded that the thesis is reasonable, as the *femininity* variable appearing separately shows the opposite tendency.

The results we obtained align with previously published research results (*e.g*. Garth, MacMillan, & Scheinberg, 1992; Radziszewska, 2014; Newbery, Lean, Moizer, & Haddoud, 2018; Bogatyreva, Edelman, Manolova, Osiyevskyy, & Shirokova, 2019). On the other hand, Pérez-Quintana, Hormiga, Martori, and Madariaga (2017) showed that cultural gender determines the occurrence of entrepreneurial intentions much more strongly than biological gender.

CONCLUSIONS

The above results prove that the masculine orientation shown is conducive to entrepreneurial intentions. Based on the results obtained among the studied group of students, the research hypothesis stating that individuals with masculine orientation exhibit a higher propensity to start a business was positively verified. It is aligned with the previously cited research results of other authors. The demonstrated relationship is undoubtedly related to psycho-personality predispositions useful in running a business, among which we can mention the propensity for risk, personal courage, competitive and achievement-oriented attitudes, which are attributed in science to masculine culture.

The obtained results generate implications for education in entrepreneurial development. Firstly, it is necessary to see the necessity of promoting from the elementary school level the development of the aforementioned traits attributed to masculine culture and thus creating young leaders, who in their future professional life will face the challenges of market competition. Obviously, it is not the

intention of the authors to call for the displacement of the female personality element from the population and thus aggressively 'breeding' the very representatives of the culture of masculinity, striving for rigour and leadership in every field, whether economic or social. Indeed, the development of entrepreneurship is not possible without the existence of courageous, creative, enterprising individuals, but neither would it be effective without the support of people who are rather oriented towards teamwork, harmony, and concern for others, with a limited propensity for risk, *i.e.* the qualities desired in employees and attributed to the female cultural dimension (Wach & Bilan, 2023).

Indeed, research limitations regarding the results obtained should be considered. One of the limitations that must be mentioned is the research sample. We limited our research to a group of economics university students, and it does not necessarily reflect trends in society. Moreover, further research needs to be expanded to other countries to make comparisons and account for cultural differences. The research published so far still needs to fill the existing research gap, so there remains a strong need for continuation. Moreover, future research should consider the educational policy in the existing and future studies analysing the impact of the current model of education in Poland on the formation of the personality traits of the younger generation.

REFERENCES

Al-Alawi, A.I., & Alkhodari, H.J. (2016). Cross-cultural Differences in Managing Businesses: Applying Hofstede Cultural Analysis in Germany, Canada, South Korea and Morocco. *International Business Management*, *95,* 40855-40861.

Audretsch, D.B., & Keilbach, M. (2004). Entrepreneurship Capital and Economic Performance. *Regional Studies*, *38*(8), 949-959. https://doi.org/10.1080/0034340042000280956

Bigos, K., & Michalik, A. (2020). Do Emotional Competencies Influence Students' Entrepreneurial Intentions?. *Sustainability, 12*(23), 10025. https://doi.org/10.3390/su122310025

Blomstermo, A., Deo Sharma, D., & Sallis, J. (2006). Choice of foreign market entry mode in service firms. *International Marketing Review*, *23*(2), 211-229. 10.1108/02651330610660092.

Bogatyreva, K., Edelman, L.F., Manolova, T.S., Osiyevskyy, O., & Shirokova, G. (2019). When do entrepreneurial intentions lead to actions? The role of national culture. *Journal of Business Research, 96*, 309-321. https://doi.org/10.1016/j.jbusres.2018.11.034

Çelikkol, M., Kitapçi, H., & Doven, G. (2019). Culture's impact on entrepreneurship and interaction effect of economic development level: an 81 country study. *Journal of Business Economics and Management, 20*(4), 777-797. https://doi.org/10.3846/jbem.2019.10180.

Czerwonka, M. (2015). Charakterystyka wskaźników modelu kulturowego Hofstede. In: J. Ostaszewski (Ed.), *O nowy ład finansowy w Polsce. Rekomendacje dla animatorów życia gospodarczego* (pp. 281-292). Warszawa: Oficyna Wydawnicza SGH w Warszawie.

Díaz-García, M.C., & Jiménez-Moreno, J. (2010). Entrepreneurial intention: the role of gender. *International Entrepreneurship and Management Journal, 6*(3), 261-283. https://doi.org/10.1007/s11365-008-0103-2

Duong, C.D., Wach, K., Vu, N.X., Ha, S.T., & Nguyen, B.N. (2022). Entrepreneurial education, government policies and programmes, and entrepreneurial behaviours: A serial moderated mediation model. *Entrepreneurial Business and Economics Review*, 10(4), 37-54. https://doi.org/10.15678/EBER.2022.100403

Esfandiar, K., Sharifi-Tehrani, M., Pratt, S., & Altinay, L. (2019). Understanding entrepreneurial intentions: A developed integrated structural model approach. *Journal of Business Research, 94*, 172-182. https://doi.org/10.1016/j.jbusres.2017.10.045

Fritsch, M., & Mueller, P. (2004). Effects of New Business Formation in Regional Development over Time. *Regional Studies*, *38*(8), 961-975. https://doi.org/10.1080/0034340042000280965

Gomes, S., & Ferreira, P. (2022). Entrepreneurial activity and economic growth: A dynamic data panel analysis of European countries. *Entrepreneurial Business and Economics Review, 10*(2), 7-20. https://doi.org/10.15678/EBER.2022.100201

Hayton J.C., George G., & Zahra S. (2002). National Culture and Entrepreneurship: A Review of Behavioral Research. *Entrepreneurship Theory & Practice*, *26*(4), 33-52.

Hayton, J.C., & Cacciotti, G. (2013). Is there an entrepreneurial culture? A review of empirical research. *Entrepreneurship & Regional Development, 25*(9-10), 708-731. https://doi.org/10.1080/08985626.2013.862962

Hofstede, G. (2001). Culture's recent consequences: Using dimension scores in theory and research. International *Journal of Cross Cultural Management, 1*(1), 11-17. https://doi.org/10.1177%2F147059580111002

Khalilov, L., & Yi, Ch.D. (2021). Institutions and entrepreneurship: Empirical evidence for OECD countries. *Entrepreneurial Business and Economics Review, 9*(2), 119-134. https://doi.org/10.15678/EBER.2021.090208

McGrath, R.G., MacMillan, I.C, & Scheinberg, S. (1992). Elitists, risk-takers, and rugged individualists? An exploratory analysis of cultural differences between entrepreneurs and non-entrepreneurs. *Journal of Business Venturing, 7*(2), 115-135. https://doi.org/10.1016/0883-9026(92)90008-F

Morris M.H., Davis D.L., & Allen J.W. (1994). Fostering Corporate Entrepreneurship: Cross-cultural Comparisons of the Importance of Individualism Versus Collectivism. *Journal of International Business Studies*, *26*(1), 65-89.

Mueller, S.L., & Thomas, A.S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing, 16*(1), 51-75. https://doi.org/10.1016/S0883-9026(99)00039-7

Naqvi, S.D.H., & Siddiqui, D.A. (2020). Personal entrepreneurial attributes and intentions to start business: The moderating role of culture. *International Journal of Human Resource Studies, 10*(1), 33-69.

Newbery, R., Lean, J., Moizer, J., & Haddoud, M. (2018). Entrepreneurial identity formation during the initial entrepreneurial experience: The influence of simulation feedback and existing identity. *Journal of Business Research, 85*, 51-59. https://doi.org/10.1016/j.jbusres.2017.12.013

Nikolaev, B.N., Boudreaux, Ch.J., & Palich, L. (2017). Cross-Country Determinants of Early-Stage Necessity and Opportunity-Motivated Entrepreneurship: Accounting for Model Uncertainty. *Journal of Small Business Management, 56*(S1), 243-280. https://doi.org/10.1111/jsbm.12400

Olaison, L., & Sorensen, B.M. (2014). The abject of entrepreneurship: Failure, fiasco, fraud. *International Journal of Entrepreneurial Behavior & Research, 20*(2), 193-211. https://doi.org/10.1108/IJEBR-09-2013-0143

Pérez-Quintana, A., Hormiga, E., Martori, J.C., & Madariaga, R. (2017). The influence of sex and gender-role orientation in the decision to become an entrepreneur. *International Journal of Gender and Entrepreneurship*. *9*(1), 8-30. https://doi.org/10.1108/IJGE-12-2015-0047

Radziszewska, A. (2014). Intercultural dimensions of entrepreneurship. *Journal of Intercultural Management*, *6*(2) 35-47. https://doi.org/10.2478/joim-2014-0010

Rubio-Bañón, A., & Esteban-Lloret, N. (2016). Cultural factors and gender role in female entrepreneurship. *Suma de Negocios*, *7*(15), 9-17. https://doi.org/10.1016/j.sumneg.2015.12.002

Rusu, C. (2014). Culture – Moderator of the relationship between contextual factors and entrepreneurial outcomes. *Managerial Challenges of the Contemporary Society, 7*(1), 63-67.

Sandhu, M.S.,Jain, K.K., & Yusof, M. (2010). Entrepreneurial Inclination of Students at a Private University in Malaysia. *New England Journal of Entrepreneurship, 13*(1), 61-72. https://doi.org/10.1108/NEJE-13-01-2010-B005

Shane, S. (1993). Cultural influences on national rates of innovation. *Journal of Business Venturing, 8*(1), 59-73. https://doi.org/10.1016/0883-9026(93)90011-S

Smith, T.J., & McKenna, C.M. (2013). A comparison of logistic regression pseudo R2 indices. *Multiple Linear Regression Viewpoints*, *39*(2), 17-26.

Stam, E., & van Stel, A. (2009). Types of Entrepreneurship and Economic Growth. In: A. Szirmai, W. Naudé, M. Goedhuys (ed.), *Entrepreneurship, Innovation, and Economic Development* (pp. 78-95). Oxford: Oxford University Press.

Szymura-Tyc, M., & Kucia, M. (2016). Organizational Culture and Firms' Internationalization, Innovativeness and Networking Behaviour: Hofstede Approach. *Entrepreneurial Business and Economics Review, 4*(4), 67-92. http://dx.doi.org/10.15678/EBER.2016.040405

Thomas A.S., & Mueller S.L. (2000). A Case for Comparative Entrepreneurship: Assessing the Relevance of Culture. *Journal of International Business Studies*, *31*(2), 287-301.

Triandis H.C. (1995). *Individualism & Collectivism.* Boulder: West View Press.

Turker, D., & Selcuk, S.S. (2009). Which factors affect entrepreneurial intention of university students?. *Journal of European industrial training, 33*(2), 142-159.

Wach, K. (2015). Impact of Cultural and Social Norms on Entrepreneurship in the EU: Cross -Country Evidence based on GEM Survey Results. *Zarządzanie w Kulturze*, *16*, 15-29. https://doi.org/10.4467/20843976ZK.15.002.3037

Wach, K., & Bilan, S. (2023). Creativity of students in favour of their entrepreneurial intentions: empirical evidence from Poland. *Creativity Studies*, 16(1), 211–224. https://doi.org/10.3846/cs.2023.15028

Wach, K., & Wojciechowski, L. (2016). Entrepreneurial intentions of students in Poland in the view of Ajzen's theory of planned behaviour. *Entrepreneurial Business and Economics Review, 4*(1), 83-94. https://doi.org/10.15678/EBER.2016.040106

Wardana, L., Narmaditya, B., Wibowo, A., Fitriana., Sarawati, T.T., & Indriani, R. (2021). Drivers of entrepreneurial intention among economics students in Indonesia. *Entrepreneurial Business and Economics Review, 9*(1), 61-74. https://doi.org/10.15678/EBER.2021.090104

Zhang, Y., Duysters, G., & Cloodt, M. (2014). The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *International Entrepreneurship and Management Journal, 10*, 623-641.

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