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IMPACT OF CULTURAL AND SOCIAL NORMS ON ENTREPRENEURSHIP IN THE EU: CROSS-COUNTRY EVIDENCE BASED ON GEM SURVEY RESULTS¹

Abstract

The links between culture and entrepreneurship are still not sufficiently well-established or explored. They started just a half of a century ago, even though the links between culture and capitalism are much older (more than 100 years old). Culture is one of the main determinants for the various entrepreneurial activities undertaken in different countries, nevertheless, it needs further exploring to yield a wider understanding of the role of the social aspects of entrepreneurship. This paper is rooted in the field of international entrepreneurship, a branch of which deals with the comparative perspective of entrepreneurship across countries and cultures. The main objective of the paper is to explore the impact of cultural and social norms on entrepreneurship in the EU countries on the basis of the GEM data of the recent report of 2013. The results prove that the national entrepreneurial culture has a positive impact on entrepreneurship.

Słowa kluczowe: przedsiębiorczość, kultura, normy społeczne, międzynarodowa przedsiębiorczość

Key words: entrepreneurship, culture, social norms, international entrepreneurship

JEL Classifications: F23, L20

Introduction

Such scientists as Schumpeter² or Marris and Somerset³ observed the links between the culture and the entrepreneurship even just a century ago, nevertheless the links between the culture and the capitalism are much more older. Berger, having searched into available data, states that the modern entrepreneurship “[...] is not only

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² See: J. Schumpeter, *A Theory of Economic Development*. Oxford [1912]1961.

³ P. Marris, A. Somerset, *African Businessman: A Study of Entrepreneurship and Development*, London 1971.

extremely productive economically, but also one of the prime carriers of peculiarly modern modes of cognition and behaviour [...]”⁴. Glinka states “entrepreneurship development [...] is not possible without the proper cultural foundations for”⁵. Similarly, Turek believes that culture determines not only entrepreneurship in general, but also the development of SME sector⁶. Busenitz, Gomez and Spencer⁷ extended and propagated the institutional context of entrepreneurship with its three dimensions such as regulatory, cognitive and normative ones. The latter “measures the degree to which a country’s residents value entrepreneurial activity and innovative thinking”⁸ and can be considered the culture of entrepreneurship, which in a comparative perspective is treated as a part of international entrepreneurship⁹.

The main objective of the paper is to explore the impact of cultural and social norms on entrepreneurship in the EU countries on the basis of GEM data. The article is organised in three sections. At first, cultural context of entrepreneurship, especially its comparisons, is discussed, which constitutes a separate research stream within the international entrepreneurship domain. The second passage is dedicated to the empirical material and applied research methods (research methodology), followed by the empirical results presentation and discussion as the third section of the article.

Cultural Context of Entrepreneurship in the EU

In a broad understanding, international entrepreneurship includes at least two different research areas¹⁰:

⁴ B. Berger, *The Culture of Modern Entrepreneurship* [in:] B. Berger (ed.), *The Culture of Entrepreneurship*. San Francisco, CA, 1991, p. 1.

⁵ B. Glinka, *Kulturowe uwarunkowania przedsiębiorczości w Polsce*, Warszawa 2008, p. 10.

⁶ See: D. Turek, *Cultural Determinants of Entrepreneurship Development in SME Sector. The Case of Poland* [in:] T. Marek, W. Karwowski, M. Frankowicz, J. Kantola, P. Zgaga (eds.), *Human Factors of a Global Society: A System of Systems Perspective*, New York 2014, pp. 481–494.

⁷ See: L.W. Busenitz, C. Gomez, J.W. Spencer, *Country Institutional Profiles: Unlocking Entrepreneurial Phenomena*, „Academy of Management Journal” 2000, no. 43(5), pp. 994–1003.

⁸ P. Zbierowski, *Entrepreneurial Education in Poland in the Context of an Institutional Profile and an International Comparison of Entrepreneurial Activity*, „Horyzonty Wychowania” 2014, no. 13(26), p. 75.

⁹ See: K. Obloj, M. Weinstein, Sh. Zhang, *Self-Limiting Dominant Logic: An Exploratory Study of Chinese Entrepreneurial Firms*, „Journal of East-West Business” 2013, no. 19(4), pp. 291–316.

¹⁰ See: K. Wach, *International Entrepreneurship and the Third Age: The Effect of the Entrepreneur’s Age on Internationalisation of Polish Businesses*, „Przedsiębiorczość i Zarządzanie” 2014, vol. XV, no. 11, cz. 1, pp. 65–80; K. Wach, *Przedsiębiorczość międzynarodowa jako nowy kierunek badań w obrębie teorii internacjonalizacji przedsiębiorstwa* (chapter 28) [in:] S. Wydymus, M. Maciejewski (eds.), *Tradycyjne i nowe kierunki rozwoju handlu międzynarodowego*, Warszawa 2014, p. 434; K. Wach, C. Wehrmann, *Entrepreneurship in International Business: International Entrepreneurship as the Intersection of Two Fields* (chapter 1) [in:] A.S. Gubik, K. Wach (eds.), *International Entrepreneurship and Corporate Growth in Visegrad Countries*, Miskolc 2014, p. 15.

- creative process of recognition and exploitation of opportunities in foreign markets; in this sense, this research area is the same as the traditional approach of the theory and practice of entrepreneurship, using the same analytical tools as in the case of establishment of domestic ventures; what is crucial, it is characterised by a high degree of creativity, innovation and entrepreneurship, and a special role in the internationalisation process is attributed to the entrepreneur,
- international studies and comparative research in the field of entrepreneurship; in this sense, this research area is the same as with traditional international comparative studies, placing entrepreneurship as the main subject of these comparative studies (e.g. GEM).

Jones *et al.* point out three parallel streams (types) of research within international entrepreneurship, namely¹¹:

- entrepreneurial internationalisation (A)
- international comparisons of entrepreneurship (B)
- international comparisons of entrepreneurial internationalisation (C).

It should be noted that in the framework of international entrepreneurship, there are many concepts and models¹². On the basis of an ontological analysis of the articles in this area for the years 1989–2009, Jones *et al.*¹³ have developed a taxonomy containing 69 different themes within 14 thematic areas and three main types (Figure 1). International comparisons of entrepreneurship is threefold: cross-country, cross-culture as well as combines cross-country and cross-culture comparisons.

Cultural context significantly influence the way of conducting a business (economic practice), forcing the adaptation of a firm activity to socio-cultural requirements which are in force in a given local community¹⁴. They perform a fundamental role in conducting business activity at the international scale (international business/international entrepreneurship)¹⁵, particularly in the process of the world economy globalization and integration in Europe (European business).

¹¹ See: N.V. Jones, N. Coviello, Y.K. Tang, *International Entrepreneurship Research (1989–2009): A Domain Ontology and Thematic Analysis*, „Journal of Business Venturing” 2011, no. 26(6), pp. 632–659.

¹² See: N.E. Coviello, M.V. Jones, P. McDougall-Covin, *Is International Entrepreneurship research a viable spin-off from its parent disciplines?* [in:] A. Fayolle, P. Riot (eds.), *Institutionalization of Entrepreneurship: Hopes and Pitfalls for Entrepreneurship Research*, Routledge 2014.

¹³ See: Jones *et al.* *op.cit.*

¹⁴ See: B. Glinka, T. Thatchenkery, *A comparative study of perceptions towards entrepreneurship in India, Poland, and the USA*, „International Journal of Human Resources Development and Management” 2013, no. 13(2/3), p. 119–135; K. Wach, *Socio-Cultural Framework of Advertisement on International Markets. A Brief Survey of European Advertisement Styles*, „Studien des Institut für den Donauraum und Mitteleuropa” 2003, no. 6, pp. 141–150; G.D. Bruton, D. Ahlstrom, D. Obloj, K. *Entrepreneurship in emerging markets: where we are today and where we need to move to in the future. Entrepreneurship*, „Theory and Practice” 2008, no. 32(1), pp. 1–14; G.D. Bruton, Ch.-M. Lau, K. Obloj, *Institutions, resources and firm strategies: a comparative analysis of entrepreneurial firms in three transitional economies*, „European Journal of International Management” 2014, no. 8(6), pp. 697–720.

¹⁵ T. Obloj, K. Obloj, M. Pratt, *Dominant Logic and Entrepreneurial Firms Performance in a Transitional Economy*, „Entrepreneurship: Theory and Practice” 2010, no. 34(1), pp. 151–170.

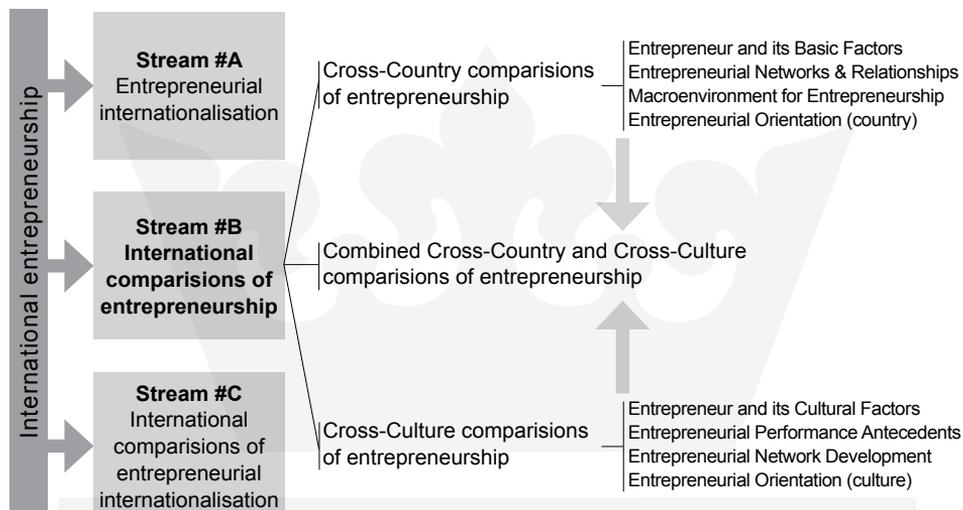


Figure 1. Cross-Country and Cross-Culture Comparisons of Entrepreneurship as a research stream within International Entrepreneurship

Source: simplified and adapted from Jones *et al.* (2011, p. 636)

In the literature of the subject, various solutions to the problem of cross-cultural differences in business are suggested¹⁶. In 1960s Hall identified two types of cultures, which are still commonly used in business studies, they are low and high context cultures¹⁷. Representatives of high context cultures (e.g. The Brits) pay a lot of attention to nonverbal communication and the cultural situational context, while low context culture representatives are very direct and focus on verbal communication (e.g. Germans).

Based on a research study among 53 countries, Hofstede¹⁸ developed a model of five dimensions of national culture, which are power distance, individualism vs. collectivism, masculinity vs. femininity, uncertainty avoidance and long-term orientation¹⁹.

Based on a study over 15 years in 50 countries, Trompenaars²⁰ prepared a five-element concept of cultural dimensions, which was developed later into seven di-

¹⁶ See: J. Szczepankiewicz, K. Wach, *Kulturowe uwarunkowania działań promocyjnych w Unii Europejskiej* [in:] K. Wach (ed.), *Działalność gospodarcza w Unii Europejskiej. Wybrane zagadnienia*, Kraków 2006, pp. 32–39.

¹⁷ See: E.T. Hall, *The Silent Language of Overseas Business*, „Harvard Business Review” 1960, no. 38.

¹⁸ See: G.H. Hofstede, *Culture's Consequences: International Differences in Work-related Values*, Beverly Hills, CA, 1980; G.H. Hofstede, *Cultures and Organizations. Software of the Mind*, London–New York 1991.

¹⁹ See: G.H. Hofstede, G.J. Hofstede, M. Minkov, *Cultures and Organizations: Software of the Mind. Intercultural Cooperation and Its Importance for Survival*, Revised and expanded 3rd Edition, New York 2010; G.J. Hofstede, P.B. Pedersen, G.H. Hofstede, *Exploring Culture: Exercises, Stories, and Synthetic Cultures*, Yarmouth, ME, 2002.

²⁰ See: F. Trompenaars, *Riding the Waves of Culture. Understanding Cultural Diversity in Business*, London 1993.

mensions²¹. They are universalism vs. particularism, individualism vs. collectivism, neutral vs. emotional, specific vs. diffuse, achievement vs. ascription, sequential vs. synchronic, internal vs. external control.

Lewis²² distinguishes three types of cultures: linear-active, multi-active and reactive ones. Representatives of linear-active culture (e.g. Germans, Scandinavians, Brits) focus generally on one task at a time, while multi-active culture representatives (such as Italians, Spaniards, Slavs) can share their attention among different business tasks. The representatives of reactive cultures wait until the other side is listened.

In his research first published in 1990, J. Mole answers the question posed by himself²³: “How to cope with the difference in cultures on the common European market area?” He proposes the use of a simple tool facilitating the assessment of various methods of firm functioning that so-called “the Mole map” is. Mole distinguishes two models of leadership (the individualistic one and the group one), and two models of organization (the systematic one and the organic one) according to which he performs the division of cultures in Europe²⁴. The systematic model of an organization recognizes the mechanistic functioning of an organization designed and built according to certain specifications, which enables to achieve the goal intended by the organization. Thus, the foundation of a systematic organization is coordination and clearly defined relations among the organization members. The model is typical for Scandinavian countries, among others. On the other hand, the organic model of an organization is based on the conviction that an organization resembles a living organism and is the personification of its members’ needs. The effectiveness of an organic organization depends on the extent to which its members are able to cooperate in order to achieve the common goal. The organic model of an organization is typical, among others, for Mediterranean countries (Spain, Portugal, Italy, Greece). The individualistic model of leadership reflects the autocratic management model (directive, despotic, “top-down” management). Its basis is the conviction that people are unequal by their nature and the most competent individuals make decisions on behalf of others. According to Mole’s concept, “powerless” creatures are supposed to submit to “powerful” creatures. A typical example of a country with the individualistic approach to leadership is Russia. On the other hand, the basis of the group approach is the conviction that although individuals may differ in capabilities or the effectiveness of action, everybody has the right to be heard, and everyone is entitled to participate in taking decisions concerning them. Such a model is reflected, among oth-

²¹ See: Ch. Hampden-Turner, F. Trompenaars, *The Seven Cultures of Capitalism: Value Systems for Creating Wealth in the United States, Japan, Germany, France, Britain, Sweden, and the Netherlands*, New York 1993.

²² See: R.D. Lewis, *When Cultures Collide: Managing Successfully Across Cultures*, London 1996.

²³ See: J. Mole, *Mind Your Manners: Managing Business Cultures in the New Global Europe*, 3rd ed., London–Yurmouth 2003.

²⁴ See: K. Wach, *Różnice kulturowe a prowadzenie międzynarodowej działalności gospodarczej* [in:] J. Rokicki, M. Banaś (eds.), *Naród, kultura i państwo w procesie globalizacji*, Kraków 2004, pp. 325–334.

ers, in the Swedes' or Danes' approach. The map shows mainly cultural differences occurring in Europe²⁵.

R.R. Gesteland²⁶ proposes the classification of business cultures based on four variables, out of which each is two-dimensional, as a result of which one can isolate eight main features of the business world cultures, and on this basis divide entrepreneurship cultures. The culture types according to this concept are as follows: relationship-focused – deal-focused; formal – informal; rigid-time – fluid-time; expressive – reserved cultures. Of course, in practice we can also come across types of cultures which depart from model behaviours, then they are defined as moderate, or as moderate with the direction of attitude. Although in some cultures mixed cultures also occur, it often happens due to the regional differentiation of individual nations²⁷. The knowledge of cultural differences enables entrepreneurs to avoid misunderstandings in negotiations with a foreign partner and to achieve mutual agreement. However, regardless of the awareness of differences in the world of international business, two iron principles are in force²⁸: the seller is expected to adapt to the buyer, as well as the visitor is expected to observe local customs.

In early-1990s House conceptualised the GLOBE (Global Leadership and Organizational Behavior Effectiveness) study researching into nine dimensions of cultures, namely power distance, uncertainty avoidance, human orientation, institutional collectivism, in-group collectivism, assertiveness, gender egalitarianism, future orientations as well as performance orientation²⁹. Radziszewska³⁰ using the GLOBE results proposes a relational concept linking cultural dimensions and entrepreneurship orientation and behaviour (Table 1).

Table 1. Relationship between cultural dimensions and entrepreneurship

Cultural dimensions	Influence on entrepreneurship
Long term orientation	positive
Short term orientation	negative
Low power distance	positive
High power distance	negative – new family firms creation positive – entrepreneurship can be used to increase one's power
Individualism	positive

²⁵ N. Daszkiewicz, K. Wach, *Małe i średnie przedsiębiorstwa na rynkach międzynarodowych*, Kraków 2013, p. 154.

²⁶ See: R.R. Gesteland, *Cross-Cultural Business Behavior: Negotiating, Selling, Sourcing and Managing Across Cultures*, Copenhagen 2005.

²⁷ See: K. Wach, *Różnice...*

²⁸ R.R. Gesteland, *op.cit.*, p. 16.

²⁹ See: R. House, P. Hanges, P. Javidan, M. Dorfman, *Culture, leadership and Organizations: the GLOBE Study of 62 Societies*, Thousand Oaks 2004.

³⁰ See: A. Radziszewska, *Intercultural dimensions of entrepreneurship*, „Journal of Intercultural Management” 2014, no. 6(2), pp. 35–47.

Collectivism	negative – entrepreneurship is based on individualistic orientation positive – more social support is offered in collectivistic societies
Human orientation	positive
Performance orientation	positive
Future orientation	positive
Low uncertainty avoidance	positive
High uncertainty avoidance	negative – formalisation and resistance to risk is against entrepreneurship positive – quality of products and services

Source: A. Radziszewska, *Intercultural dimensions of entrepreneurship*, „Journal of Intercultural Management” 2014, no. 6(2), p. 44–45.

Research Methodology

The study is rooted in international entrepreneurship research, as it uses the cross-country and cross-culture comparisons of entrepreneurship and the role of culture as its framework conditions. It is designed as a quantitative study using the secondary data.

The analysis uses the basic GEM data for the EU countries, which have been conducted since 1997, and the data are publicly available. The recent GEM report³¹ collects data only for 23 countries out of 28 member states of the European Union (excluding Austria, Bulgaria, Cyprus, Denmark, Malta). The 2013 GEM report explores entrepreneurship in 70 countries. The sample represents an estimated 75% of the world's population and 90% of the world's total GDP. In all GEM covered countries almost 200 thousands individuals have been surveyed³².

Based on the literature study and own observations of social and economic relation in modern societies and economies, the following research hypotheses were assumed:

- H1:** Innovation-driven economies are much more entrepreneurial than efficiency-driven economies.
- H2:** Entrepreneurs from entrepreneurial cultures perceive more entrepreneurial opportunities and it results in much higher rate for new businesses.
- H3:** Necessity-based entrepreneurship is rather low in entrepreneurial cultures as these two variables are negatively correlated.

In order to obtain the established research objective and especially to verify the research hypotheses, the following statistical test were applied: Student's *t* test, Spearman's rank correlation coefficient, median test, Pearson's linear correlation coefficient. The statistical calculations were made by the use of the statistical software package Stata/SE® v. 12.0 as well as Statistica® PL v. 10.

³¹ See: J.E. Amorós, N. Bosma, *Global Entrepreneurship Monitor: 2013 Global Report*, Desarrollo 2014.

³² *Ibidem*, p. 10.

Results and Discussion

Cultural and social norms is one of the entrepreneurship framework conditions (EFCs), which, as the indicator of the GEM survey³³, is created based on interviews with national experts (approximately 3,800 national experts on entrepreneurship participated in the study from 70 countries). The responses follow a five-point Likert scale. The higher the indicator is, the more entrepreneurial national culture is. In the EU the lowest value was 1.9 (Slovakia), while the highest was 3.5 (Estonia), both in efficiency-driven economies (Table 2). The GEM report analyses also the entrepreneurial intentions as well as entrepreneurial activities (Table 3) and entrepreneurial aspirations.

Using *t* statistics as well as median test, there is no significant difference between the cultural and social norms index and the economy type (efficiency-driven vs. innovation-driven). Based on a hierarchical clustering the two large groups of countries can be clustered (Figure 1). It is very interesting that Poland has exactly the same value (2.8) as Germany and together with Finland (2.9) makes up a first order cluster. The least entrepreneurial culture cluster consists of Slovakia, Spain, Italy, Croatia and Czech Republic. Estonia as having the most entrepreneurial culture is an exception.

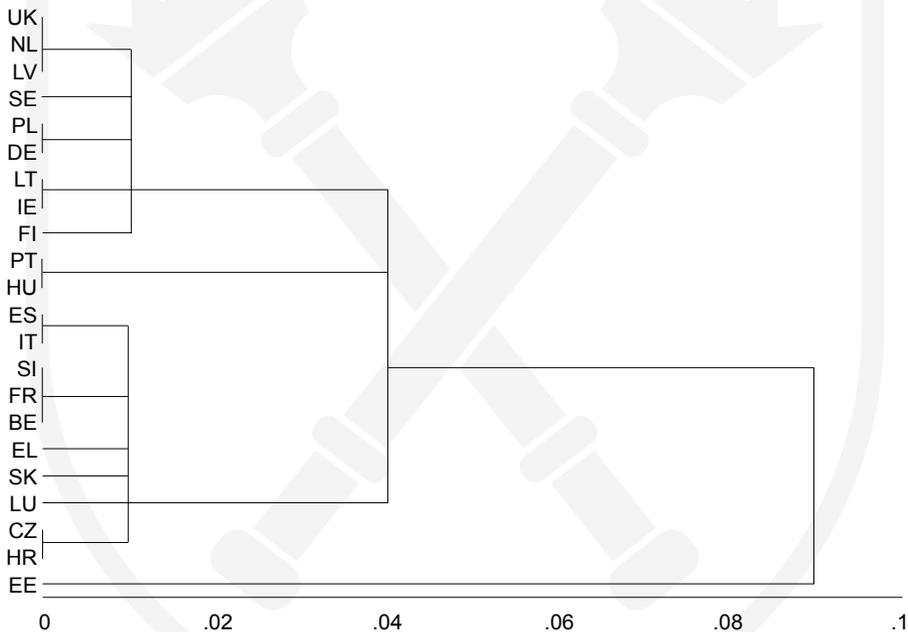


Figure 1. Dendrogram for social and cultural norms clustering in the EU based on single-linkage clustering method using Euclidean squared distance

Source: own study based on GEM 2013 data

³³ *Ibidem.*

Table 2. Perceived entrepreneurial culture in the EU countries according to the GEM 2013 data

Country	economy type	Cultural & social norms (a five-point Likert scale)	Entrepreneurial Attitudes and Perceptions (in % of population aged 16–64)						
			Perceived opportunities	Perceived capabilities	Fear of Failure	Entrepreneurial intentions	Entrepreneurship as a good career choice	High status of successful entrepreneurs	Media attention to successful entrepreneurs
Belgium	innovation-driven	2.2	31.5	33.8	46.6	7.8	54.8	52.2	43.9
Croatia	efficiency-driven	2.0	17.6	47.2	35.2	19.6	61.5	43.1	42.9
Czech Republic	innovation-driven	2.0	23.1	42.6	35.8	13.7		47.8	
Estonia	efficiency-driven	3.5	46.1	40.0	38.8	19.4	53.2	58.6	40.7
Finland	innovation-driven	2.9	43.8	33.3	36.7	8.3	44.3	85.5	68.5
France	innovation-driven	2.2	22.9	33.2	41.1	12.6	55.3	70.0	41.4
Germany	innovation-driven	2.8	31.3	37.7	38.6	6.8	49.4	75.2	49.9
Greece	innovation-driven	2.3	13.5	46.0	49.3	8.8	60.1	65.1	32.4
Hungary	efficiency-driven	2.6	18.9	37.5	44.8	13.7	45.7	74.1	28.4
Ireland	innovation-driven	3.0	28.3	43.1	40.4	12.6	49.6	81.2	59.9
Italy	innovation-driven	2.1	17.3	29.1	48.6	9.8	65.6	72.4	48.1
Latvia	efficiency-driven	3.1	34.8	47.8	41.6	22.7	61.4	59.5	58.6
Lithuania	efficiency-driven	3.0	28.7	35.4	41.7	22.4	68.6	57.2	47.6
Luxembourg	innovation-driven	2.4	45.6	43.3	42.9	14.1	39.4	70.6	36.3
Netherlands	innovation-driven	3.1	32.7	42.4	36.8	9.1	79.5	66.2	55.2
Poland	efficiency-driven	2.8	26.1	51.8	46.7	17.3	66.8	59.9	58.5
Portugal	innovation-driven	2.6	20.2	48.7	40.1	13.2			
Romania	efficiency-driven	1.9	28.9	45.9	37.3	23.7	73.6	72.6	61.3
Slovakia	efficiency-driven	2.2	16.1	51.0	33.2	16.4	49.2	58.5	51.7
Slovenia	innovation-driven	2.2	16.1	51.5	29.6	12.4	57.4	68.1	50.5
Spain	innovation-driven	2.1	16.0	48.4	36.3	8.4	54.3	52.3	45.6
Sweden	innovation-driven	3.2	64.4	38.8	36.6	9.5	52.0	71.5	58.5
United Kingdom	innovation-driven	3.1	35.5	43.8	36.4	7.2	54.1	79.3	49.6

Source: own compilation based on GEM 2013 data (J.E. Amorós, N. Bosma, *Global Entrepreneurship Monitor: 2013 Global Report, Desarrollo 2014*).

Table 3. Entrepreneurial activities in the EU countries according to the GEM 2013 data

Country	Nascent Entrepreneurship rate	New Business ownership rate	Early-stage Entrepreneurial activity (TEA)	Established business ownership rate	Discontinuation of Business	Necessity-driven (% of TEA)	Improvement-driven opportunity (% of TEA)
Belgium	3.1	1.9	4.9	5.9	1.9	29.0	43.9
Croatia	6.3	2.0	8.3	3.3	4.5	37.4	29.8
Czech Republic	4.9	2.7	7.3	5.3	3.4	22.7	60.3
Estonia	8.8	4.5	3.1	5.0	2.1	14.8	50.1
Finland	2.7	2.7	5.3	6.6	2.0	17.9	66.0
France	2.7	1.8	4.6	4.1	1.9	15.7	60.9
Germany	3.1	2.0	5.0	5.1	1.5	18.7	55.7
Greece	3.3	2.3	5.5	12.6	5.0	23.5	35.8
Hungary	6.0	3.7	9.7	7.2	2.9	28.0	38.7
Ireland	5.5	3.8	9.2	7.5	2.5	18.0	43.8
Italy	2.4	1.1	3.4	3.7	1.9	18.7	18.4
Latvia	8.1	5.3	13.3	8.8	3.5	21.2	52.7
Lithuania	6.1	6.4	12.4	8.3	3.5	23.3	55.2
Luxembourg	6.0	2.8	8.7	2.4	2.8	5.6	56.6
Netherlands	4.7	4.8	9.3	8.7	2.1	8.0	67.1
Poland	5.1	4.3	9.3	6.5	4.0	47.4	32.7
Portugal	4.2	4.2	8.2	7.7	2.8	21.4	50.7
Romania	6.2	4.2	10.1	5.3	4.3	31.6	31.6
Slovakia	6.1	3.6	9.5	5.4	5.5	40.2	40.2
Slovenia	3.6	2.9	6.5	5.7	2.6	24.1	53.4
Spain	3.1	2.2	5.2	8.4	1.9	29.2	33.2
Sweden	5.9	2.5	8.2	6.0	2.4	9.7	58.0
United Kingdom	3.6	3.6	7.1	6.6	1.9	16.1	46.2

Source: own compilation based on GEM 2013 data (J.E. Amorós, N. Bosma, *Global Entrepreneurship Monitor: 2013 Global Report*, Desarrollo 2014).

Based on Spearman's rank correlation coefficient (Table 4), it was observed that the higher the cultural and social norms index is, the lower necessity-driven entrepreneurship ratio is (-0.59) and the higher opportunity-driven entrepreneurship ratio is (0.36). The results prove the positive correlation between the national entrepreneurial culture and the entrepreneurship ratio, and negative between improvement-driven opportunity and necessity-driven.

Table 4. Results for Spearman's rank correlation coefficient

Correlation variables	Cultural & social norms	Early-stage Entrepreneurial activity (TEA)	Necessity-driven (% of TEA)	Improvement-driven opportunity (% of TEA)
Cultural & Social Norms	1			
Early-stage Entrepreneurial Activity (TEA)	0.18	1		
Necessity-driven (% of TEA)	-0.59*	0.27	1	
Improvement-driven Opportunity (% of TEA)	0.36	0.00	-0.66*	1

Results for 22 countries excluding Romania, $r^* (N = 22, \alpha = 0,05) = 0,4251$

Source: own calculations based on GEM 2013 data

More detailed calculations, using Pearson's linear correlation coefficient (Table 5), reveal more dependences between cultural and social norms index and entrepreneurship activities and intentions. The more entrepreneurial the national culture is, the entrepreneurs see more business opportunities (0.70). In entrepreneurial cultures, the status of entrepreneur is rather widely appreciated (0.41) and media pays a lot of attention to successful entrepreneurship stories (0.38). The opportunity-driven entrepreneurship is positively correlated with entrepreneurial culture (0.43), while it is negatively correlated with necessity-driven entrepreneurship (-0.44). It is worth noticing that entrepreneurial culture influences also on nascent entrepreneurship rate (0.43) and new business ownership rate (0.61). The results are with line to many other research studies exploring the links between culture and entrepreneurship³⁴.

³⁴ Compare: B. Glinka, *Kulturowe...*; A. Radziszewska, *Intercultural...*

Table 5. Results for Pearson's linear correlation coefficient

Correlation variables	Cultural & social norms	Correlation variables	Cultural & social norms
Cultural & Social Norms	1	Cultural & Social Norms	1
Perceived Opportunities	0.70*	Nascent Entrepreneurship Rate	0.43*
Perceived Capabilities	-0.13	New Business Ownership Rate	0.61*
Fear of Failure	0.01	Early-stage Entrepreneurial Activity (TEA)	0.23
Entrepreneurial Intentions	0.13	Established Business Ownership Rate	0.26
Entrepreneurship as a Good Career Choice	0.10	Discontinuation of Business	-0.33
High Status of Successful Entrepreneurs	0.41	Necessity-driven opportunity (% of TEA)	-0.44*
Media Attention to Successful Entrepreneurs	0.38	Improvement-driven opportunity (% of TEA)	0.41

* $r^* (df = 19, \alpha = 0,05) = 0,4329$; $r^* (df = 19, \alpha = 0,1) = 0,3687$

Source: own calculations based on GEM 2013 data

Conclusions

Hayton, George and Zahra³⁵ underline that the links between culture and entrepreneurship are not sufficiently well-established and enough explored, despite the fact that as Bergman notices it is nothing new, as more than 100 years ago Weber started exploring religious-ethical motivations and entrepreneurship. Freytag and Thurik³⁶ find that culture is one of the main determinants for entrepreneurial activities varied across countries, nevertheless it needs further exploring to bring wider understanding of the role of social aspects of entrepreneurship.

The data of the recent GEM 2013 report for the EU countries, based on a required and applied statistical calculations allowed to confirm two out of three assumed hypotheses, while one hypothesis was rejected. Innovation-driven economies are much more entrepreneurial than efficiency-driven economies.

The first hypothesis H1 was falsified. There is no difference as for entrepreneurial culture (measured by the GEM index of cultural and social norms) between innovation-driven and efficiency-driven economies of the EU (t statistics, median test).

³⁵ See: J.C. Hayton, G. George, S.A. Zahra, *National Culture and Entrepreneurship: A Review of Behavioral Research*, „Entrepreneurship: Theory and Practice” 2002, no. 26(4), pp. 33–52.

³⁶ See: A. Freytag, R. Thurik, *Introducing Entrepreneurship and Culture* (chapter 1) [in:] A. Freytag, R. Thurik (eds.), *Entrepreneurship and Culture*, Springer 2010.

The second hypotheses H2, stating that entrepreneurs from entrepreneurial cultures perceive more entrepreneurial opportunities and it results in much higher rate for new businesses, was supported. The higher the GEM cultural index for a country is, the higher new business ownership rate is as well as the higher index for perceived opportunities is (Pearson's linear correlation).

The calculations of two different statistical tools (Spearman's rank correlation coefficient, Pearson's linear correlation) confirmed the third hypotheses H3 stating that necessity-based entrepreneurship is rather low in entrepreneurial cultures as these two variables are negatively correlated.

Determinants and factors contributing to entrepreneurship fostering and blooming are varied and multifaceted. Entrepreneurial culture is a part of the multidimensional structure supporting and influencing on entrepreneurship from the cross-country and cross-culture perspective. The cultural-and-social factors still remain somewhat unclear as for their impact on entrepreneurship. Different researchers use different methodology approaches and techniques, which sometimes results even in opposite conclusions. The main limitation of the presented results lies in the static analyses (2013 year), so the future exploration and explanations of this research problem need the dynamic sample as the GEM reports have been publishing since 15 years now, so the GEM database can be also used for dynamic comparisons, which can lead to new and more solid explorations.

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