Cultural Characteristics and the Entrepreneurial Intentions of University Students

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SUMMARY

The goals of the paper are to analyse the relationship between the cultural dimensions and to investigate the entrepreneurial intentions and activity of university students in 21 selected OECD countries. The analysis was conducted using the GUESSS database, which also includes three cultural dimensions of the GLOBE project. We found that there is a positive correlation between the entrepreneurial intentions of students and In-Group Collectivism. Uncertainty Avoidance does not have a direct effect on entrepreneurial activity of intentions; however, it correlates positively with perceived behavioural control, which has been proved to have a significant effect on entrepreneurial intentions.
Keywords: Cultural dimensions, entrepreneurial activity, entrepreneurial intentions, GLOBE, GUESSS, OECD
Journal of Economic Literature (JEL) codes: D70, L26, M14, N30, P17, Z10
DOI: http://dx.doi.org/10.18096/TMP.2017.02.01

INTRODUCTION

The connection between the practical domain of entrepreneurship and the theoretical models of economic growth was explained by Schumpeter with a creative and very convincing argument in his work first published in 1911 (Schumpeter 1934). Even though Schumpeter's idea is more than 100 years old, it is more popular than ever. The postman delivers our letters; his company is based on the customer's demand for communication. But if all companies that specialised in facilitating the communication of their customers had been content with playing only the postman's role, we would not be living in an era of communication revolution. While preparing this paper, the authors have exchanged several e-mail, Skype and Messenger messages; these services, however, were not brought to life by the needs of the authors, or anybody else, for that matter. They were created by companies, and then they spread because these firms convinced customers to use them instead of the good old mail system.

Innovations created by competing firms provide cheaper and better quality products to customers – this latter process is described as economic growth by macroeconomics. Taking a very simplified approach, one can conclude that the entrepreneur is a key agent who has a fundamental influence on market competition and economic growth. Just as the quantity of labour or physical resources affect the value of income produced, so does the entrepreneurial activity in a process that combines the traditional factors of production. The simplified approach should be stressed here, as opinions on the role of the entrepreneur in economic theory are rather mixed. Neoclassical economics, on the one extreme, does not even discuss the role of the entrepreneur (Baumol, 1968), while Knight (1921) and – following in his footsteps – Kirzner (1974) see the entrepreneur as the real producer of goods (with everybody else only providing resources for the process).

If we accept the view of those streams of economics that see the entrepreneur as a key resource (empirical evidence shows that entrepreneurial activity has an effect on economic growth, see van Stel et al. 2005), naturally the need arises to analyse the factors that influence the intensity and quality of entrepreneurial activity. The range of possible factors is very large. Mazzarol identifies the following nine components of the so-called entrepreneurial ecosystem: government policy, regulatory framework and infrastructure, funding and finance, culture, mentors, advisors and support system, universities, education and training, human capital and workforce, and local and global markets (Mazzarol, 2014, p. 9). This paper focuses on the role of culture and looks for an answer to the following question: to what extent do cultural differences detected among the young people of

the developed countries influence their entrepreneurial activity and intention?

LITERATURE REVIEW

Developed countries differ from each other both in terms of entrepreneurial activity (e.g. Ács et al. 2016), and in terms of cultural values (e.g. Hofstede 2001). It seems logical to assume that the two phenomena are related to each other.

Cultural Dimensions

Hofstede is one of the pioneers of cultural differences research. He distinguishes the following five national cultural dimensions (Hofstede 2001):

1. Power distance: the degree to which the less powerful members of a society accept and expect that power is distributed unequally.
2. Individualism or collectivism: the degree to which the identity of the members of the society is defined in terms of the individual or a certain group.
3. Masculinity: the degree to which gender roles are separated from each other, and whether the society is based on material rewards for success or is consensus-oriented.
4. Uncertainty avoidance: the degree to which the members of the society feel threatened and uncomfortable with unexpected and unforeseen events.
5. Long-term or short term-orientation: the degree to which the society prefers a future-oriented, innovative, pragmatic approach to one focusing on traditions.

In 1994 the GLOBE (Global Leadership & Organizational Behavior Effectiveness) project was started, partially based on Hofstede's work (House et al. 2004). GLOBE works with nine cultural dimensions (Bakacsi 2012), some of which are similar to Hofstede's, others of which can be interpreted as expansions of the original Hofstede dimensions (Hofstede himself added a sixth dimension, Indulgence, to his system):

1. Power distance: the degree to which members of an organization or society expect and agree that power should be stratified and concentrated at higher levels of an organization or government.
2. Uncertainty avoidance: the extent to which members of an organization or society strive to avoid uncertainty by relying on established social norms, rituals, and bureaucratic practices.
3. Institutional collectivism: is the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action.
4. In-group collectivism: is the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families (GLOBE's Institutional and In-group collectivism are an expansion on and go beyond of Hofstede's individualism-collectivism dimension).
5. Gender egalitarianism: the degree to which an organization or a society minimizes gender role differences while promoting gender equality.
6. Assertiveness: the degree to which individuals in organizations or society are assertive, confrontational, and aggressive in social relationships.
7. Performance orientation: the degree to which an organization or society encourages and rewards group members for performance improvement and excellence.
8. Humane orientation: the degree to which individuals in organizations or society encourages and rewards individuals for being fair, altruistic, friendly, generous, caring, and kind to others. (GLOBE's Gender egalitarianism, Assertiveness, Performance orientation, and Humane orientation are an expansion of and go way beyond of Hofstede's Masculinity/Femininity concept)
9. Future orientation: the degree to which individuals in organizations or societies engage in future oriented behaviours such as planning, investing in the future, and delaying individual or collective gratification (very similar to Hofstede's Long-term orientation) (House et al 2004, p 12).

These dimensions, whether Hofstede's or GLOBE's, should have an effect on entrepreneurial activity. Hayton et al. (2002), for instance, predict that entrepreneurial activity should be more common and popular in societies where people prefer risk taking and making autonomous decisions to conformity, group interest and traditions – in other words the society is characterised by Individualism, low Power distance and Uncertainty avoidance, and Masculinity.

Empirical studies usually confirm these assumptions; however, the relationships are typically found to be quite weak, and sometimes the direction of the relationship is the opposite of what we expect. Shane (1993) reported on a study that analysed the relationship between Hofstede's cultural dimensions and innovativeness in 33 countries. The relationships that he found showed that there is a positive correlation in case of Individualism and a negative one in case of Uncertainty avoidance and Power distance (high Power distance was found to be coupled with lower innovativeness). Davidsson and Wiklund (1997) measured the cultural values of individuals living in six regions of Sweden, and these values were compared to the number of new businesses registered in those regions. Davidsson (1995) did a similar study before that, when he compared the number of new businesses registered with a so-called entrepreneurial values index, an index comprised of several cultural values. Both studies found a weak but statistically significant correlation with such values as achievement motivation, locus of control, perceived risk, and change orientation.

Several studies have checked the relationship between national culture and the values of the entrepreneurs.

Mitchell et al. (2000) surveyed entrepreneurs and non-entrepreneurs in seven countries and concluded that Individualism and Power distance have a statistically significant association with the decision to start a business. Mueller and Thomas (2000) surveyed university students in nine countries, and again, they found that the entrepreneurial orientation is strongest in countries where Individualism is strong and Uncertainty avoidance is low. McGrath et al. (1992) conducted their survey among entrepreneurs and non-entrepreneurs in nine countries. They concluded that irrespective of their nationality, entrepreneurs are characterised with high Power distance, Individualism, and Masculinity, and with low Uncertainty avoidance.

Zhao et al. (2012) analysed the entrepreneurial activity of 42 countries using the cultural dimensions of the GLOBE project. In the study they controlled for the development level of the countries (using the GDP per capita data), and tested four indicators of entrepreneurial activity originally taken from the GEM project: early-stage entrepreneurship, established entrepreneurship, high-growth entrepreneurship, and high-innovation entrepreneurship. They found that Power distance, In-group collectivism, and Humane orientation help early-stage and established entrepreneurship in the low- and mid-income countries. In high-income countries, however, a high value of these characteristics lowers the value of the same indicators. They also manage to prove in their analysis that Uncertainty avoidance, Performance orientation, and Future orientation help high-growth and high-innovation entrepreneurship, especially in high-income countries. It is worth noting that, contrary to the studies mentioned above, Zhao et al. assume that there is a positive association between Uncertainty avoidance and both high-growth and high-innovation entrepreneurship. They argue that laying down clear rules fosters the efficient and structured operation of firms (Germany and Japan are mentioned as examples). Another argument is that highly structured firms may push more risk-tolerant and adventurous employees towards starting their own businesses. Their hypotheses were based on these arguments, but the study did not manage to find a statistically significant connection between Uncertainty avoidance and entrepreneurial activity.

Baliaeva et al. (2015) tested the relationship between Hofstede's dimensions and the entrepreneurial intentions of students on the GUESSS database (the very same database we use in this paper). They showed that the entrepreneurial intentions of the students are stronger in more individualistic societies and weaker in societies characterised with high Uncertainty avoidance.

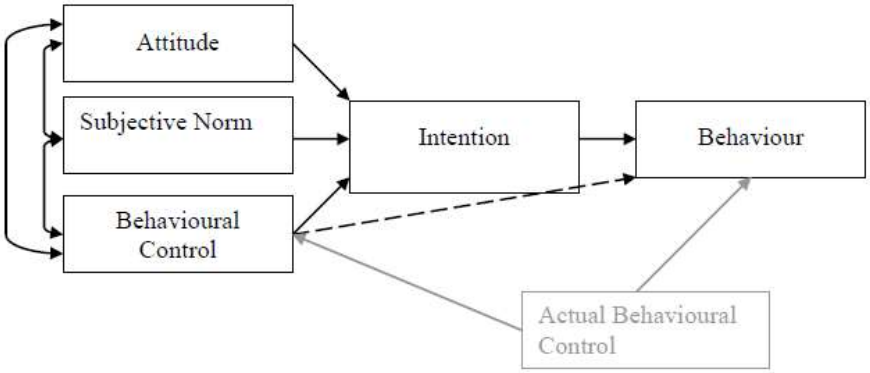
Caution needs to be applied when evaluating the results of the empirical literature. Although there seems to be a connection, it is quite weak. It seems obvious that the national culture also has an effect on political and economic institutions, and those also influence the entrepreneurial activity. When attitudes related to the intention of starting a business are tested, a possible problem can arise from the fact that cultural characteristics are reflected in the survey answers (Hayton et al. 2002).

Entrepreneurial Activity and Entrepreneurial Intentions

Although both entrepreneurial activity and entrepreneurial intentions have been measured, a distinction needs to be made between the two, since often even the strongest intentions do not lead to action. But action without serious intentions is also very unlikely. Research on the possible determinants of entrepreneurial intentions is abundant. Some of the works stress the importance of education and especially the importance of learning by doing (Lackéus 2015; Valerio et al. 2014).

Among the important individual characteristics, the most important were found to be the willingness to take risk, the desire to be independent (Meager et al. 2003), and innovative thinking. Several studies address the issue of the social environment's role in the process of entrepreneurship. Autio and Wennberg (2010) argue that the norms and attitudes of the community have a fundamental influence on the behaviour of the entrepreneurs. National culture, as the previous subchapter depicted, also matters. It can affect individual characteristics (Thurik & Dejardin 2012; Thomas & Mueller 2000), but its direct effect on entrepreneurial statistics was also tested (Zhao et al. 2012; Shane et al. 1991). The regulatory framework and the financing system also matter.

Ajzen's theory of planned behaviour (1991) is a complex model that evaluates the effect of various factors detected at different levels (individual, communities, institutions). His model was tested on the GUESSS database in previous studies (Farkas & Gubik 2013; Gubik, 2016), but they did not check the relationship between the model's components and the cultural dimensions.



Source: Ajzen 2006

Figure 1. Factors shaping entrepreneurial intentions

The attitude towards starting a new business is the first component of the model. The more positive the individual's attitude is, the stronger the intention to start a new business. Subjective norms (the support of the social environment) also have a positive effect on the intention to start a new business. The more you think that your immediate environment likes the idea of you starting a new business, the more inclined you are to start it. Behavioural control, the third component, has a dual effect. On the one hand, the more you feel that you are in control of things, the more attractive the idea of starting a business becomes. On the other hand, self-efficacy also boosts the intention of starting a business. The more you feel that you have the skills and knowledge to run a business, the more comfortable you are with the idea of starting a business.

DATA AND METHODS

We used the GUESSS (Global University Entrepreneurial Spirit Students' Survey) database in our analysis. GUESSS was started in 2003 by the University of St. Gallen, and it surveys the entrepreneurial intentions and entrepreneurial activity of university students. It is being used in more and more countries: in 2013 it reached 109,000 students in 759 universities of 34 countries.

In our calculations we included those OECD members where the number of respondents was above 300. The distribution of respondents is shown in Table 1.

Table 1
Distribution of GUESSS respondents in selected countries

Country	Frequency	Percent
Australia	301	0.41
Austria	3,323	4.57
Belgium	368	0.51
Netherlands	8,141	11.19
France	555	0.76
Germany	10,567	14.53
Greece	391	0.54
Italy	7516	10.33
Poland	11,108	15.27
Portugal	303	0.42
Spain	9,924	13.64
Switzerland	6,032	8.29
Canada	335	0.46
United Kingdom	519	0.71
Japan	780	1.07
Hungary	8,500	11.68
Denmark	855	1.18
Slovenia	804	1.11
Estonia	1,231	1.69
Finland	597	0.82
Mexico	600	0.82
Total	72,750	100.00

Source: Own work

Comparative data on the cultural dimensions are available from the GLOBE project. They are, however, aggregated, and they include answers from the total population (aged between 18 and 64). GUESSS, on the other hand, only surveys students enrolled in an institute of higher education, and it gives access to disaggregated data. For this reason we chose to test only those cultural dimension that were surveyed by GUESSS (and not use the values from GLOBE), even though a quick test showed that there is no association between the age of the GUESSS respondents and their cultural values (suggesting that the cultural values of different age groups within a country are identical or very similar). Our choice meant that we could only test those dimensions that were integrated into the GUESSS survey, namely: In-group collectivism, Power distance, and Uncertainty avoidance. The questions used to measure these dimensions were the following.

In-Group Collectivism (IGC)

- In my society, children take pride in the individual accomplishments of their parents. (1-7 Likert scale, 1=strongly disagree, 7=strongly agree).
- In my society, parents take pride in the individual accomplishments of their children. (1-7 Likert scale, 1=strongly disagree, 7=strongly agree).
- In my society, aging parents generally live at home with their children. (1-7 Likert scale, 1=strongly disagree, 7=strongly agree).
- In my society, children generally live at home with their parents until they get married. (1-7 Likert scale, 1=strongly disagree, 7=strongly agree)

Power Distance (PD)

- In my society, rank and position in the hierarchy have special privileges. (1-7 Likert scale, 1=strongly disagree, 7=strongly agree).
- In my society, a person's influence is based primarily on…
  …ability and contribution to society
  …authority of one's position (Semantic differential scale, 1=first answer, 7=second answer)
- In my society, followers are expected to…
  …obey leaders without question
  …question leaders when in disagreement (Semantic differential scale, 1=first answer, 7=second answer)
- In my society, power is…
  …concentrated at the top
  …shared throughout society (Semantic differential scale, 1=first answer, 7=second answer)

Uncertainty Avoidance (UA)

- In my society, orderliness and consistency are stressed, even at the expense of experimentation and innovation. (1-7 Likert scale, 1=strongly disagree, 7=strongly agree).
- In my society, most people lead highly structured lives with few unexpected events. (1-7 Likert scale, 1=strongly disagree, 7=strongly agree).
- In my society, societal requirements and instructions are spelled out in detail so citizens know what they are expected to do. (1-7 Likert scale, 1=strongly disagree, 7=strongly agree)
- My society has rules or laws to cover…
  …almost all situations
  …very few situations (Semantic differential scale, 1=first answer, 7=second answer)

To measure entrepreneurial activity and entrepreneurial intentions the following questions were used:

- Are you currently trying to start your own business / to become self-employed? (yes/no)
- Are you already running your own business / are you already self-employed? (yes/no)

To measure the elements of the theory of planned behaviour we calculated the mean values of the following variables (1-7 Likert scale, 1=strongly disagree, 7=strongly agree)

Entrepreneurial intention

- I am ready to do anything to be an entrepreneur.
- My professional goal is to become an entrepreneur.
- I will make every effort to start and run my own firm.
- I am determined to create a firm in the future.
- I have very seriously thought of starting a firm.
- I have the strong intention to start a firm someday.

Attitudes

- Being an entrepreneur implies more advantages than disadvantages to me.
- A career as entrepreneur is attractive for me.
- If I had the opportunity and resources, I would become an entrepreneur.
- Being an entrepreneur would entail great satisfaction for me.
- Among various options, I would rather become an entrepreneur.

Perceived behavioural control

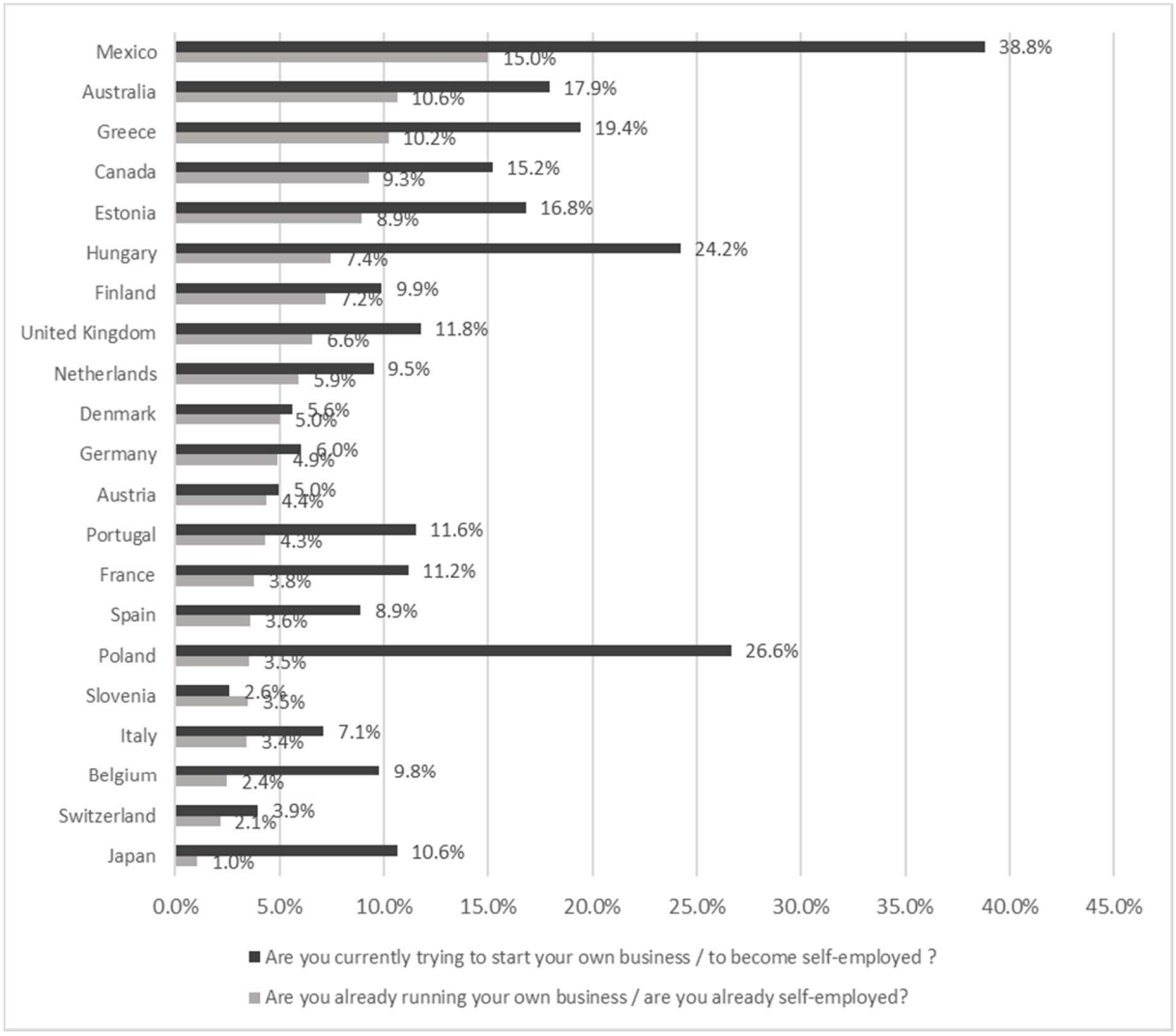
- I am usually able to protect my personal interests.
- When I make plans, I am almost certain to make them work.
- I can pretty much determine what will happen in my life.

Subjective norms

- If you were to pursue a career as an entrepreneur, how would people in your environment react? (Your close family/Your friends/Your fellow students).

RESULTS

Figure 2 shows the entrepreneurial activity and intentions of the students in the selected 21 OECD countries. The differences are visible in the case of both existing and nascent businesses. In this paper we show the extent to which these differences can be explained with cultural differences. First we focus on the entrepreneurial activity (students who had already started businesses), then we analyse the entrepreneurial intentions and the career plans of the students.



Source: Own calculation, N=72,750.

Figure 2. The entrepreneurial activity and intentions of students

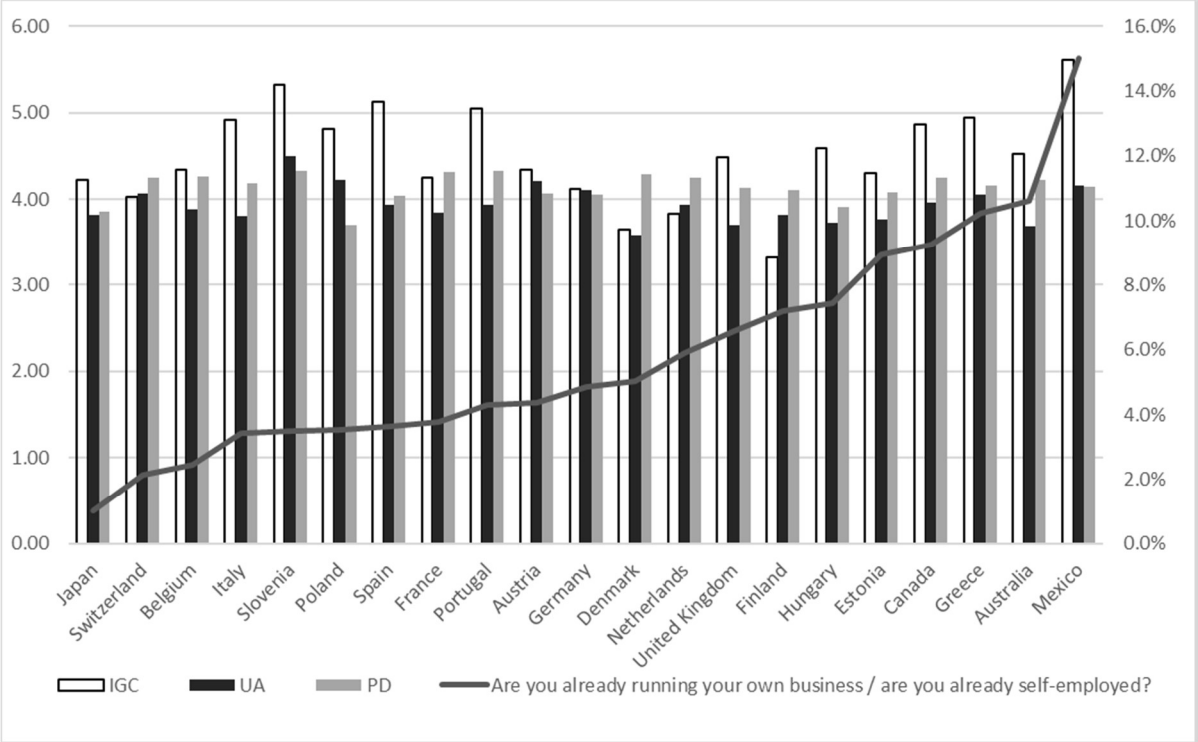
The paper breaks down the results at an individual and at a country level. In the first case the individual is the unit of the analysis. We test the relationship between the answers given by individuals to the cultural variables and to the entrepreneurial variables. With this approach we can show the connection among the entrepreneurial activity, entrepreneurial intentions, career plans, and cultural values of every respondent. In the second case the countries are the unit of analysis. An arithmetic mean is calculated for every country and every variable, using the individual scores of all respondents belonging to the country. This way we can detect the typical differences among countries in terms of entrepreneurship and cultural characteristics. The stochastic relationships among country-level data are also analysed in the paper.

Entrepreneurial Activity and Cultural Dimensions

We start the analysis by checking whether differences in entrepreneurial activity can be attributed to cultural differences.

Individual data

There are no significant differences on the individual level. Entrepreneur and non-entrepreneur students are not significantly different in how they see and evaluate the culture of their societies, at least not in the case of the three measured dimensions. The entrepreneurial activity is mostly determined by the family background and the demographical variables (gender, age) (Gubik, 2015; Farkas & Gubik, 2016); these, however, are not discussed in this paper.



Source: Own calculation, N=72,750.

Figure 3. Values of cultural dimensions and the ratio of students running a business (individual level)
IGC: In-group collectivism; PD: Power distance; UA: Uncertainty avoidance

Aggregated data

Figure 3 suggests that the three cultural dimensions we were able to measure using the GUESSS data do not directly influence the entrepreneurial activity. Only in case of In-group collectivism were we able to detect a statistically significant association (Pearson's R=0.455; p=0.038). If we go beyond the GLOBE dimensions, the two GUESSS factors that had a significant relationship with the entrepreneurial activity were differences in risk related to entrepreneurship (Pearson's R=0.555; p=0.009) and national differences in the willingness to take risks (Pearson's R=0.486; p=0.025).

Entrepreneurial Intentions and Cultural Dimensions

Individual data

A distinctive pattern can be identified for entrepreneurial intentions. In-group collectivism is positively associated with entrepreneurial intentions, as well as with all three components of the Ajzen model (attitudes, behavioural control, and subjective norms). Pearson's R has a value between 0.124 and 0.241, suggesting a weak relationship. A similarly weak but positive association was found in case of Uncertainty avoidance (with the exception of subjective norms, where the relationship is not statistically significant). The highest Pearson's R we found here was 0.133 (p=0.000), for behavioural control. Power distance did not have a significant effect on the individual differences in entrepreneurial intentions.

Our results show that respondents (irrespective of their nationality) rated the In-group collectivism and the Uncertainty avoidance of their society more highly if their entrepreneurial intentions were higher.

Aggregated data

An average can be calculated for the components of Ajzen's model of planned behaviour. We can find out, for example, whether the attitude to start a new business is lower or higher in one country compared to the others. This takes us away from the original goal and use of Ajzen's model, but by calculating the national averages for the components, we can test whether they are correlated in any way with the national values of the cultural dimensions. We found no similar analysis in the literature. The results of the calculations are shown in Table 2.

Table 2
Relationship among the components of the theory of planned behavior and the GLOBE dimensions (correlation matrix).

	1	2	3	4	5	6	7
1 Entrepreneurial intention	1						
2 Attitudes	.978** 0.000	1					
3 Perceived behaviour control	.551** 0.010	.498* 0.022	1				
4 Subjective norms	.715** 0.000	.679** 0.001	.777** 0.000	1			
5 In-Group Collectivism	.762** 0.000	.776** 0.000	0.369 0.099	.474* 0.030	1		
6 Uncertainty Avoidance	0.217 0.344	0.224 0.330	.486* 0.025	0.216 0.347	.472* 0.031	1	
7 Power Distance	-0.055 0.812	-0.080 0.731	0.052 0.822	0.343 0.128	-0.030 0.896	-0.050 0.830	1

Source: own calculation, N=21

Power distance, again, is not related to any of the model's components. The aggregated data confirm that the national differences in entrepreneurial intentions in the 21 countries analysed are not affected by the Power distance. Uncertainty avoidance does have some effect, however it is only significantly associated with the behavioural control. The relationship is positive, suggesting that the more important norms and rules are in reducing uncertainty in a country, the more confident the members of the society are in carrying out a given task.

In-group collectivism is positively correlated with attitudes, and subjective norms, as well as with entrepreneurial intentions. The strongest relationship was found for attitudes and entrepreneurial intentions (Pearson's R is above 0.7), but the relationship is moderately strong and statistically significant with subjective norms. In-group collectivism is a sign of a cohesive and loyal society (Bakacsi 2008), which also leads to higher entrepreneurial intentions, according to our analysis.

The positive relationship between In-group collectivism and entrepreneurial intentions contradicts many results found in the literature. In order to better understand our results, we checked the career plans of the students. We found the highest In-group collectivism values among students who planned to take over a family business (IGC score =4.97). A somewhat lower IGC score was found for students who planned to take over a business led by someone else (4.7), but even those students who planned to start their own business had a higher than average IGC score (4.61). In-group collectivism values varied for students aiming for a career as an employee, too: those who planned to work for smaller-sized enterprises had higher IGC scores (4.55), while career plans that are more impersonal (working in the public sector or for a large corporation) were paired with the lowest IGC scores.

Conclusion and Further Research

In our study we found the strongest relationship between In-group collectivism and entrepreneurial intentions. The effect of In-group collectivism was tested both with the use of GLOBE-like country averages and at the individual level. The association was positive in both cases. This result supports the line of research that suggests that belonging to a smaller, closed group strengthens entrepreneurial intentions. One of the explanations for this phenomenon is that people with high In-group collectivism values would rather plan their career at a smaller, friendly family business than at an impersonal large corporation. Some tests run on our database back this argument. Respondent with the highest In-group collectivism scores are those whose first career choice is to become an entrepreneur (with students planning to take over a family business having the highest scores of all). They are followed by those who plan to work for a small business, and after that come the ones who would like to work for a middle-sized company. Respondents with more impersonal career plans (working in the public sector or for a large company) have the lowest IGC score. The connection between career plans and In-group collectivism can be detected on the country level as well, which provides further support for our explanation.

Uncertainty avoidance was the other GLOBE dimension that was found to have a statistically significant effect on entrepreneurial intentions; namely, it is positively associated with Ajzen's behavioural control. The relationship is moderately strong on the country level, and weaker on the individual level. Once again, there is no agreement in the literature about the direction of the relationship. We found that high Uncertainty avoidance is positively correlated with high behavioural control. Given that behavioural control is a determinant of entrepreneurial intentions, Uncertainty avoidance indirectly influences entrepreneurial intentions as well, although no direct evidence of this was found in our analysis (no connection was found on the country level, and only a weak one on the individual level). Societies characterised with high Uncertainty avoidance have an institutional environment that makes socioeconomic relations more predictable, which apparently makes individuals feel more in control (and this is what behavioural control measures).

Although we based our study on the GLOBE dimensions, we could only test three of them, because these were the only ones addressed by questions in the GUESSS survey. Our results are also limited by the fact that only 28 OECD members took part in the GUESSS survey in 2013, and the number of respondents varies significantly among countries (as shown in Table 1). Since the number of respondents was below 300 in 7 OECD members, the tests were run on results from the other 21 countries.

The results would be more robust if more countries were tested, and if the distribution of respondents was more proportionate (primarily in terms of absolute numbers, and also in terms of per population ratios). The literature focuses on the three dimensions tested in this paper, but it also suggests that the involvement of other dimensions such as Future orientation or Performance orientation could strengthen our results. Promising results could be drawn from a cluster analysis (clustering countries according to their cultural characteristics), and from case studies that present the institutional background of countries with higher entrepreneurial activity.

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