

Does Cultural Support Facilitate the Development of Entrepreneurship? A Cross-National Study

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Abstract

National culture is deeply rooted in the values of society and individual's behaviors. These values and behaviors are not the same in the different nations and can affect the way people perceive entrepreneurship. A nation that wants to promote entrepreneurship and facilitate the emergence of more entrepreneurs needs a supportive culture.

The objective of the research is to understand whether national culture differences affect the development of entrepreneurship in a country. For this purpose, panel data extracted from the Global Entrepreneurship Monitor are regressed against two bipolar types of culture (achievement versus lenient) based on the six cultural dimensions of Hofstede. The study includes 45 countries located in different parts of the world.

Findings provide strong support for cultures based on achievement orientation where the development of new ventures appears to be more dynamic, both in terms of entrepreneurial intentions and in the early stage of new business creation. Further, in more achievement-oriented cultures, where the gender gap in entrepreneurship tends to be smaller, the impact on the early stage of the entrepreneurial activity is strong. Inversely, the lenient cultures seem to be less supportive of entrepreneurship initiatives.

Keywords: *Entrepreneurship, National culture, Leniently-based culture, Achievement-based culture, Hofstede's values.*

JEL classification: L26, Z10, J16

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1. Introduction

Entrepreneurship can be expressed as the ability to take risks to exploit an opportunity, typically by starting or running a business. The recognition of entrepreneurship potential to create social and economic value, have been explored

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by several researchers that have attempted to understand the factors that encourage or discourage entrepreneurship (Anggadwita et al., 2021).

Existing research has taken different approaches to this topic. Many authors have examined the extent to which variations in attitudes and behaviours towards entrepreneurship can be explained by individuals' differences (Lee et al., 2022; Maheshwari et al., 2023; Turker & Selcuk, 2009; van der Zwan et al., 2016;). Herein, a number of factors have been studied, including socio-demographic factors, psychographic factors, past experiences, perceptions of favourable external conditions, among many others (Bernardino & Freitas Santos, 2018; Maheshwari et al., 2023; Marlow, 2019; Salmony & Kanbach, 2022).

A branch of the literature has also attempted to understand the differences in entrepreneurship at the national level, studying the extent to which different institutional, economic and social factors are or are not able to explain the differences found across nations (Beynon et al., 2020; Guerrero et al., 2021; Naguib, 2024).

Despite the recognition in recent years that entrepreneurship is a socially constructed phenomenon, there are still very few studies that analyse the impact of national culture on entrepreneurship (Stephan, 2020).

Given this gap in the literature, the aim of this article is to examine the extent to which cross-national variation in the level of entrepreneurship can or cannot be explained by cultural differences and the possible moderating role of the level of economic development.

Having this objective in mind, the rest of the article is structured as follows. Section 2 presents a literature review on entrepreneurship, focusing on entrepreneurial intentions, entrepreneurial behaviour and gender differences in entrepreneurship. A review of national culture and entrepreneurship is systematised in section 3, with particular emphasis on explaining the Hofstede approach to measuring culture. The relationship between entrepreneurship and an achievement-based and leniently-dispose cultures is also analysed in section 3. Data and research methodology is described in section 4. In section 5, results are presented and discussed. Finally, the conclusions are aligned.

2. Entrepreneurship

The concept of entrepreneurship

The concept of entrepreneurship is generally associated with the creation of a new business (Dees, 2001). More broadly, Carlsson et al. (2013, p. 914) describe entrepreneurship as “an economic function that is carried out by individuals, entrepreneurs, acting independently or within organizations, to perceive and create new opportunities and to introduce their ideas into the market, under uncertainty, by making decisions”.

The decisions taken by entrepreneurs could encompass the intention previous to the effective decision and the behaviour during the process. Entrepreneurial intention is the commitment to perform the necessary behaviour to carry out an entrepreneurial initiative, opting for the creation of a new company

(Krueger & Carsrud, 1993). Entrepreneurial behaviour “involves the activities of individuals who are associated with creating new organizations rather than the activities of individuals who are involved with maintaining or changing the operations of on-going established organizations” (Gartner et al., 2010, p. 99).

The literature on entrepreneurship highlights the concept of entrepreneurial behaviour, which involves innovation, risk-taking capacity and proactivity (Kuratko et al., 2007). The study of culture and entrepreneurship includes social and economic aspects related with specific values and beliefs that would influence entrepreneurial intention and behaviour (Bretones & Silva, 2009).

Entrepreneurial intention

Intentions can be described as “a state of mind directing a person’s attention toward a specific object or a path in order to achieve something” (Vesalainen & Pihkala, 1999, p. 3)”. Intentions can either be seen as an anticipation of a conscious action to be taken in the future (Liñero et al., 2024).

Entrepreneurial intentions, in turn, can be described as the development of the motivation or the desire to start a business before the actual creation of a business (Liñero et al., 2024). Literature has recognized the important role that entrepreneurial intentions exert in the decision to establish a new business, being considered as a predictor of potential entrepreneurial activities and behaviours (Fallah et al., 2023). Entrepreneurial intention “is the stage of the next step in human behaviour, in which entrepreneurship is assumed to be the stage for predicting a person’s choice to set up his own business” (Anggadwita et al., 2021, p. 312). This position can be explained in light of the theory of planned behavior. Herein, according to Ajzen (1991), intentions reflect the motivational factors that influence behaviour. They also reflect the amount of effort an individual plans to expend to perform the behaviour.

Existing research has supported that entrepreneurial intentions are context-embedded and, as such, are influenced by existing contextual factors, including existing subjective norms embedded in a particular culture (Liñero et al., 2024).

Entrepreneurial behaviour

As described above, intentions can be a good predictor of future behaviour. However, the predisposition to be entrepreneurial is not always reflected in the real exercise of entrepreneurship, as entrepreneurial intentions do not always translate into action (Ndofirepi & Steyn, 2023). As adverted by Sheeran (2002), there is a gap between intentions and entrepreneurial behaviour that is not negligible. Indeed, strong intentions are not sufficient to trigger an associated behaviour and to lead to entrepreneurial action (Ndofirepi & Steyn, 2023).

The measurement of the effective entrepreneurial activity in different countries has recently attracted some interest, given the enormous potential of entrepreneurial activity for the economic and social development of countries (Beynon et al., 2020).

As entrepreneurship is commonly seen as the act of starting a new business, existing measures of the level of entrepreneurial activity tend to reflect the number of new enterprises that are created or the number of people starting a new business. Here, entrepreneurial behaviour or entrepreneurial activity refers to the personal actions taken in the pursuit of creating new ventures (Belchior & Lyons, 2021).

Similar to that described in relation to entrepreneurial intentions, entrepreneurial behaviour is also influenced by several factors at a micro or national level, such as the country economic development, the entrepreneurial framework conditions or the social context (Beynon et al., 2020). Entrepreneurship could not be seen as just an economic activity as it is also a socially embedded concept, and influenced by socio-cultural dimensions. As mentioned by Naguib (2024, p. 11), “entrepreneurial activity also depends on the social structures and social relations that are rooted in every society’s norms, beliefs, ideologies, and conventions”.

Entrepreneurial ventures could be grouped by different typologies. One of the most used classifications is based on age or the state of development of the initiative.

According to the organizational life cycle, they could be defined as nascent ventures, new ventures, established or discontinued.

A widely used measure to assess the entrepreneurial dynamism of a country is the total early-stage entrepreneurial activity (Beynon et al., 2020; Uhlaner & Thurik, 2007). According to the terminology used by GEM, early-stage entrepreneurial activity includes either nascent entrepreneurship and the creation of new enterprises, by entrepreneurs involved in the creation of a business and owner-managers of a new firm.

The research carried out by the Global Entrepreneurship Monitor has contributed to the development of research comparing entrepreneurship in different contexts and, although not immune to criticism, used by different researchers to study the entrepreneurial activity in different countries.

Gender in Entrepreneurship

Existing literature suggests the existence of a gender gap in entrepreneurship that is unfavourable to women. Indeed, in most countries it has been found that men are more involved in entrepreneurship activities than women, as their entrepreneurial rate is higher (Pistilli et al., 2023). However, this gap varies from one country to another and also between different sectors of activity (Pistilli et al., 2023).

This asymmetry in entrepreneurial activity has led to the emergence of a new field of study, typically referred to as female entrepreneurship. Female entrepreneurship is seen as the activity of women who create, manage and own businesses (Figueiredo et al., 2023). In other words, female entrepreneurship is also understood as entrepreneurial activity carried out by women by taking risks and identifying opportunities in their environment to combine resources in unique ways (Anggadwita & Dhewanto, 2016).

Research has identified several factors that contribute to lower entrepreneurial activity among women. These include a greater lack of access to

resources, especially compared to men (Figueiredo et al., 2023), the greater difficulty in accessing finance, especially in the formal financing system (Pistilli et al., 2023; Sena et al., 2012; Winkler & Medeiros, 2011). Networking is also pointed out as one of the reasons, as women's networks are structurally different when compared to men's (Watson, 2012). Indeed, existing research suggests that women are more likely than men to rely on informal, strong and extensive networks that influence their ability to identify and exploit entrepreneurial opportunities (Bernardino & Santos, 2019).

According to Kepler and Shane (2007), women find the start-up environment more hostile and difficult than men, which has a negative impact on their propensity to become entrepreneurs. The same is found with respect to the fear of failure, which is higher for women.

The weakness of role models, especially female ones, as well as some societal stereotypes are also barriers to female entrepreneurship (Figueiredo et al., 2023).

Some gender barriers to entrepreneurship arise from cultural values, norms and practices (Bullough et al., 2022). Herein, the cultural context has also been identified as being able to influence women's entrepreneurial activity (Anggadwita et al., 2021; Naguib, 2024; Pistilli et al. 2023). As highlighted by Pistilli et al. (2023), gender bias in the field of entrepreneurship is a social construction and, as such, varies across different countries and geographical locations, as it is largely dependent on socio-cultural issues.

As also referred by Bullough et al. (2022, p. 985) "gender and culture dynamically interact, shaping gender role expectations and identities, and the economic and social environment in which women's entrepreneurship is embedded".

As such, the culture of the country is seen as being able to influence the existence of a more or less pronounced gender gap, with certain types of culture being more supportive of female entrepreneurship than others (Pistilli et al., 2023; Stelter, 2002).

3. National culture and entrepreneurship

Measuring culture

Culture is a collection of values, preferences, beliefs, behaviours, habits and attitudes that differentiate societies (Griffin & Pustay, 1999). This definition encompasses "specific beliefs, norms, and expectations within a society that affect societal culture", and behavioural patterns of a national group (Bullough et al., 2022). At the national level, culture could be perceived as the "underlying value systems that are specific to a group or society and motivate individuals to behave in a certain way, such as starting a business" (Shinnar et al., 2012, 466). These concepts of culture means that people have certain values and expectations about entrepreneurship that may vary across cultures. The values and preferences could be measured by aggregating individual scores (Hayton and Cacciotti, 2013).

There are two alternative approaches to studying culture: values (Hofstede, 2001) and descriptive norms (House et al. 2004). The values approach has been used to predict entrepreneurship rates (Hayton et al., 2002; Hofstede, Noorderhaven, Thurik, Uhlaner, Wennekers, & Wildeman, 2004; Uhlaner & Thurik, 2007; Wennekers, Thurik, Van Stel, & Noorderhaven, 2007). Based on Weber's thesis, Jackman and Miller (1998) argue that Protestant values promote entrepreneurial skills. Other authors argue that societies with more individualists have a larger supply of potential entrepreneurs and, therefore, a higher rate of entrepreneurship (Davidsson & Wiklund, 1997; Hayton et al., 2002). The descriptive norms perspective describes existing typical behaviours that exert normative influence on the behavior of individuals within a culture (Shteynberg et al., 2009). This approach has rarely been applied in the context of entrepreneurship (Stephan & Uhlaner, 2010).

This research is based on the values approach, more specifically, in the six dimensions framework of Hofstede (1991; 2001; Hofstede & Bond, 1998; Hofstede et al., 2010). Table 1 presents a brief definition of the six dimensions.

Dimensions of Hofstede

Table 1

Dimension	Definition
Power Distance	"the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally" (Hofstede (2011, p. 9)
Individualism/collectivism	"degree to which people in a society are integrated into groups. On the individualist side we find cultures in which the ties between individuals are loose. On the collectivist side we find cultures in which people from birth onwards are integrated into strong, cohesive in-groups, often extended families" (Hofstede, 2011, p. 11).
Masculinity/Femininity	"distribution of values between the genders" (Hofstede, 2011, p. 11). Typical masculine values are "assertiveness, the acquisition of material things and a lack of concern for others", while feminine are "modest and caring" values.
Uncertainty avoidance	"society's tolerance for ambiguity. It indicates to what extent a culture programs its members to feel either uncomfortable or comfortable in unstructured situations" (Hofstede, 2011, p. 10).
Long-/short-term orientation	includes the values of "perseverance, thrift, ordering relationships by status, and having a sense of shame; values at the short-term pole were reciprocating social obligations, respect for tradition, protecting one's 'face', and personal steadiness and stability" (Hofstede, 2011, p. 13).
Indulgence/restraint	"stands for a society that allows relatively free gratification of basic and natural human desires related to enjoying life and having fun. Restraint stands for a society that controls gratification of needs and regulates it by means of strict social norms". (Hofstede, 2011, p. 15).

Source: Author's own elaboration

The decision to use the Hofstede's framework in this research is supported by a large number of comparative studies (Pietro & Buticè, 2021). For instance, Kirkman et al. (2006), in a comprehensive review of empirical research, conclude that Hofstede's cultural values have been used in 180 empirical journal articles and edited volumes chapters published between 1980 and June 2002. This review was enhanced a decade later with the inclusion of more empirical studies that, despite the criticism and limitations of the framework, is still used by many researchers (Kirkman et al., 2017).

As the objective of the study is to understand whether or not a society facilitates entrepreneurship, the six dimensions of Hofstede are transformed into two bipolar types of society. To attain that purpose, the six dimensions of Hofstede were recoded to a rating scale between 1 and 5, maintaining the same meaning, that is higher scores in both scales indicate higher power distance, individualism, masculinity, long-term orientation and indulgence. The uncertainty avoidance dimension was inversely recoded so that higher scores indicate lower risk orientation. Then, the solution was to create second-order factors of the six dimensions, which allows them to be combined in the same analyses, and provide a more complete representation of the two kinds of societies.

Table 2 presents the two-factor solution where the achievement-based society is characterized by high loadings of individualism, masculinity, long-term orientation and indulgence. Thus, an achievement-based society can be described as a culture that rewards individual accomplishments and masculinity and in which long-term orientation and indulgence is viewed as a key way to achieve something. The second factor is labelled leniently-based society and is characterized by high loadings in power distance and uncertainty avoidance. In this type of society low power distance instils a culture that cherished entrepreneurship and low uncertainty avoidance are recognized as inherently to entrepreneurship.

Second-order factor solution of cultural values dimensions

Table 2

Hofstede Dimensions	Achievement-based culture (a)	Leniently-based culture (a)
Power Distance	0.422	-0.759
Individualism	-0.622	0.499
Masculinity	0.656	-0.004
Uncertainty Avoidance	0.059	0.743
Long-term Orientation	-0.779	0.087
Indulgence	0.603	0.557
Variance Explained	33.674	28.230

Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; KMO (Kaiser-Meyer-Olkin measure of sampling adequacy) = 0.594; Bartlett's test of sphericity – 45.410 (df 15): p=0.000.

Source: Author's own elaboration.

Entrepreneurship and achievement-based culture

The following values are common on an achievement-based society. The first dominant cultural value is individualism as this type of society create a more favourable environment for the development of entrepreneurial initiatives. In individualistic societies the potential entrepreneurs are encouraged as typical values such as high level of self-confidence, initiative, and courage are treasured (Celikkol et al., 2019). The study developed by Celikkol et al. (2019) provides empirical evidence for the positive impact of individualism on entrepreneurship attitudes, abilities, aspirations and success. Also, Mueller and Thomas (2001) found support for the proposition that an entrepreneurial orientation, defined as internal locus of control combined with innovativeness, is more likely in individualistic societies. Other researchers detected that individualism positively impact individuals' locus of control, that, in turn, influences entrepreneurial behaviour (Garcia-Cabrera and Garcia-Sotto, 2008).

Another feature of an achievement-based society is high-masculine orientation that will support entrepreneurial behaviour from members of such societies that are expected to be independent, strong and ambitious. In this type of cultures, achievement is associated with wealth and position with self-assertiveness whereas a successful career and independence are the dominant values (Celikkol et al., 2019). There are contradictory results about the association between masculinity and entrepreneurship in cross-country studies. Some studies contend the idea that the successful entrepreneur scores high on masculinity (e.g. Hayton et al., 2002), while others provide empirical support for the negative impact of masculinity on entrepreneurship attitudes, abilities and success (Celikkol et al., 2019).

The third characteristic of an achievement-based society is long-term orientation that, according to empirical evidence has a positive impact on entrepreneurship abilities, aspirations and success (Celikkol et al., 2019).

Finally, the value of indulgence is expected to be present in achievement-based societies. According to Celikkol et al. (2019) there is a positive association between indulgence and entrepreneurial attitudes, abilities and success, as values such as high internal locus of control, personal value systems, desire to be economically independent, capacity for enjoyment and pleasant personality are cherished among the entrepreneurs.

Thus, we would expect that:

H1: An achievement-based culture rate highly entrepreneurship intentions.

H2: An achievement-based culture rate highly early-stage entrepreneurial activity.

H3: An achievement-based culture rate highly a small gender gap in entrepreneurship.

Entrepreneurship and leniently-dispose culture

A leniently-disposed society results from the combination of lower power distance and lower uncertainty avoidance. In societies characterized by small power distance people believe that inequality among individuals with regard to income,

status and wealth should be minimized (Shinnar et al., 2012). Since entrepreneurs are individuals more achievement-oriented, greater power distance will be negatively associated with the desire for autonomy (Hofstede, 2001), and an entrepreneurial attitude. Indeed, previous research has identified a negative relationship between power distance and the level of innovation in different countries (Shane, 1993; Rinne et al., 2012).

Cultures who score low on uncertainty avoidance tend to be less affected by ambiguity and more tolerant of inequality and copyright rules infringement (Freitas Santos & Cadima Ribeiro, 2006). Some research suggests that countries characterized by a culture of low uncertainty avoidance have a higher entrepreneurial orientation (e.g. McGrath et al., 1992; Mueller & Thomas, 2000; Wennekers et al., 2007). Also, Mueller and Thomas (2001) found support for the proposition that an entrepreneurial orientation is more likely in low uncertainty avoidance cultures.

Therefore, we would expect that:

H4: A leniently-based culture is negatively associated with entrepreneurship intentions

H5: A leniently-based culture is negatively associated with early-stage entrepreneurial activity.

H6: A leniently-based culture is negatively associated with a smaller gender gap in entrepreneurship.

4. Data and research methodology

This research attempts to explore the cross-nation variation in the level of entrepreneurship and two bipolar typologies of societies: the achievement-based and the leniently-dispose culture. The two indices are derived from the reanalysis of data previously collected and widely published of the six dimensions of Hofstede as mentioned before.

To answer the research objective and test the research hypotheses, we construct a database of three sets of data: i) entrepreneurial activity; ii) rating scale of cultural values for each country according to Hofstede; iii) control variable.

The GDP (Gross Domestic Product) of the different countries in analysis was included as a control variable. As argued in the literature, including institutional factors when studying the influence of culture on entrepreneurial activity across countries is seen as quite positive (Busenitz et al., 2000).

The database compiles information retrieved from the Global Entrepreneurship Monitor about the activity of entrepreneurship in 45 countries (dependent variable) that was regressed against the two typologies of culture (independent variable) and a control variable (GDP).

Dependent variables: Entrepreneurship

The data related to entrepreneurship activity was gathered from the dataset available on Entrepreneurial Behaviour and Attitudes of the Global Entrepreneurship Monitor (GEM). The GEM is a long-term, multi-national research study on entrepreneurship that is conducted on an annual basis using population-based data to measure the level of entrepreneurship in each of the participating countries.

The data was collected and compiled for a period of 5 years, with annual information between 2019 and 2023.

To measure the dynamics of the entrepreneurial activity, three dependent variables were considered:

Entrepreneurial intentions (EI) - refers to latent entrepreneurs, who intend to start a business in the next three years;

Total early-stage Entrepreneurial Activity (TEA) - indicates the percentage of individuals who are starting or running a new business. For qualification as a "new business" is considered that the business has not yet paid salaries for 42 months or more.

Female/Male Total early-stage Entrepreneurial Activity (FEMAS) - expresses the proportion of female entrepreneurship compared to the male one in the country; the ratio is determined by the percentage of female a nascent entrepreneur or owner-manager of a 'new business', divided by the equivalent percentage for their male counterparts. The higher the ratio the lower the gender imbalance in entrepreneurship.

Independent variables: Culture

The measures of ABC (Achievement-Based Culture) and LDC (Leniently-Dispose Culture) were the result of a second-order two-factor solution after the six dimensions of Hofstede were recoded to a rating scale between 1 and 5 maintaining the same meaning.

Achievement-Based Culture (ABC) - corresponds to the first factor combines individualism, masculinity, long term orientation and indulgence.

Leniently-Dispose Culture (LDC) - corresponds to the second factor and combines power distance and uncertainty avoidance.

Control variable: GDP

Considering the activity of entrepreneurship and its relationship with wealth, the GDP was included as a control variable.

- Gross domestic product per capita (GDP)- refers to the gross domestic product of a given country divided by midyear population, that is reported in current U.S. dollars. Data for the period 2019 to 2022 have been obtained from the World Bank database.

Sample

The sample is made up of countries with very different cultural characteristics. The cultural diversity of the sample could be seen in Table 3. Europe is the most represented continent with 21 countries, followed by Latin America and the Caribbean with 8 countries. North America is also well represented as the United States, Canada and Mexico are included. The Middle East and North Africa includes 6 countries, with Middle East over represented. Asia and the Pacific countries include 4 countries, including China. Sub-Saharan Africa is the least represented with only two countries.

Regional composition of the sample

Table 3

Region	N	%
Europe	21	46.8%
Latin America and the Caribbean	8	17.9%
Asia and Pacific countries	4	8.8%
Sub-Saharan Africa	2	4.4%
Middle East and North Africa	6	13.3%
North America	4	8.8%
Total	45	100.0%

Source: Author's own elaboration

5. Results

Descriptive statistics and Pearson correlations analysis

The correlations between the variables as well as the means and standard deviations are shown in Table 4. The only variable that raises some concerns is the correlation between EI and TEA but as the two variables are independent variables no problems of multicollinearity are expected. The remaining variables show some statistically significant correlations. Indeed, some association is observed between the other entrepreneurial activity indicators (R EI & FEMAS=0.345, $\alpha=0,05$; R TEA & FEMAS=0.493, $\alpha =0,01$). An analysis of the relationship between entrepreneurship indicators and cultural characteristics shows a positive and significant relationship between entrepreneurship and a more achievement-based culture, for all three variables analysed. On the other hand, there is a slight inverse relationship between the country's entrepreneurship indicators and the degree of leniency shown. However, this relationship is not statistically significant. GDP is not statistically significantly correlated with any of the other variables analysed.

Descriptive statistics and Pearson correlation matrix

Table 4

Variables	1	2	3	4	5	6
1 - EI	1	0.72**	0.345*	-0.204	0.373*	-0.305
2 - TEA	0.72**	1	0.493**	-0.075	0.354*	-0.063
3 - FEMAS	0.345*	0.493**	1	0.197	0.409*	-0.169
4 - ABC	0.373*	0.354*	0.409*	1	0.000	0.073
5 - LDC	-0.305	-0.063	-0.169	0.000	1	0.203
6 - GDP	-0.204	-0.075	0.197	0.073	0.203	1
Mean	22.46	13.72	0.748	-0.000	-0.000	0.0004
Standard Deviation	14.736	7.333	0.1345	1	1	0.000
N	45	45	45	38	38	44

* Significant at the 0.05 level;** Significant at the 0.01 level. Source: Author's own elaboration

Regression analysis

To assess the impact of the typologies of cultures on entrepreneurship, a linear ordinary least square regression model was used. Three different dependent variables were considered: (i) the entrepreneurial intention; (ii) total early-stage entrepreneurial activity and (iii) the female/male total early-stage entrepreneurial activity.

For each of the above propositions, two different models were considered. The first model, focuses exclusively on the type of culture, without considering any type of control variables. Model 2 controls the entrepreneurship activity for country income (GDP) also considering the type of culture.

OLS Regression of cultural values on national entrepreneurship rates

Table 5

Culture	Model 1			Model 2		
	Ent Int	TEA	FemMale TEA	Ent Int	TEA	FemMale TEA
Achievement-based	0.373**	0.354**	0.409**	0.299*	0.319*	0.357**
Leniently-disposed	-0.305**	-0.063	-0.169	-0.268*	-0.055	-0.225
GDP				-0.008	-0.036	0.266*
Fvalue	5.834**	2.598*	4.272**	2.889**	1.287	3.404**
R ²	0.232	0.129	0.196	0.265	0.105	0.236
Adjusted R ²	0.189	0.08	0.150	0.173	0.023	0.167
Durbin Watson	1.347	1.29	2.119	1.23	1.195	2.098

* Significant at the 0.10 level;** Significant at the 0.05 level;***Significant at the 0.01 level.

Source: Author's own elaboration

The analysis of Table 5 reveals that countries exhibiting a higher score on the dimension achievement-based culture are those that have a higher entrepreneurial activity. The country achievement-based culture positively influence all the three entrepreneurial variables in analysis entrepreneurial intentions, total early-stage entrepreneurial activity rate, and female/male TEA ratio, as seen by the standardised beta's positive coefficient. This positive effect is found in both Models (Model 1 and 2), which reinforce the robustness of the results attained. Thus, even controlling the results for the countries' income (GDP), the positive influence of the achievement-based culture on entrepreneurship is also found (the OLS regressions in model 2 are statistically significant).

Conversely, countries characterized by a more Leniently-disposed culture exhibit lower level of entrepreneurial intentions (Model 1 and Model 2). Although the influence of a more leniently-disposed culture has a negative sign, it is only statistically significant at the 0.05 level for EI, and is not marked as statistically significant in the models regressed on TEA and the female/male ratio.

The model fit statistics indicates that, conjointly, achievement-based culture and leniently-disposed culture explains about 23,2% of cross-country variations in

entrepreneurial intentions (Model 1, statistically significant at the 5% level) or 26,5% when we control the results for the country's GDP level (Model 2, statistically significant at the 5% level). On the one hand, the national achievement-based culture explains about 12,9% of the country TEA (Model 1, R2 statistically significant at the 10% level), or 10,5% if we control the results for the countries income level (however, the results for the model 2 as a whole are not statistically significant). Finally, Female/Male TEA Ratio is explained by the achievement based culture in 19,6% (Model 1, $\alpha = 0,05$) or by the achievement-based culture and GDP conjointly in about 23,6% (Model 2, $\alpha = 0,05$).

The control variable, GDP, is only identified as being able to explain entrepreneurship in terms of the Female Male ratio; herein, as shown by the positive standardised beta's coefficient ($\beta = 0,266$; $\alpha = 0,10$), countries with higher income levels tend to have a higher rate of female entrepreneurship compared to the rate shown for male entrepreneurship; there is no statistically significant association between the income level of the country and EI or TEA (Model 2).

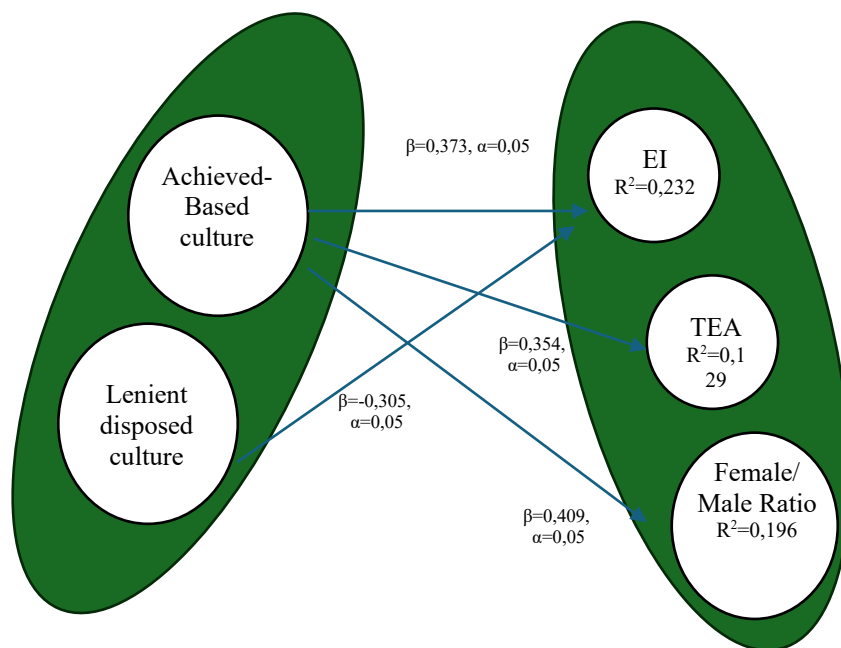


Figure 1. Model 1

Source: Author's own elaboration

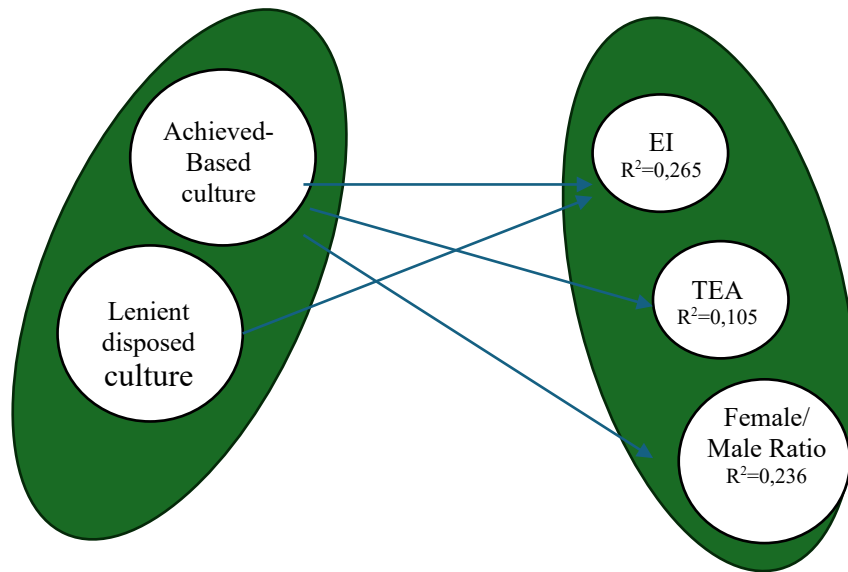


Figure 2. Model 2

Source: Author's own elaboration

Table 7 summarises the results of the test of hypothesis.

Systematization of research hypotheses

Table 7

Hypothesis	Proposition	Results
H1	EI → ABC (+)	Supported
H2	TEA → ABC (+)	Supported
H3	MF → ABC (+)	Supported
H4	EI → LBC (-)	Supported
H5	TEA → LBC (-)	Not Supported
H6	MF → LBC (-)	Not Supported

Source: Author's own elaboration

The research carried out makes it possible to assess the influence of the societal culture on the existing level of entrepreneurship in different countries.

The research was conducted in 45 countries that present very different levels of entrepreneurial activities with various dominant values in society, as measured by Hofstede's six dimensions.

The results obtained confirm that, as Liñeiro et al. (2024) argue, entrepreneurship is a contextual phenomenon, being the entrepreneurial behaviour influenced by the culture of the country. The research shows that some societies are

more culturally supportive of the practice of entrepreneurship while others tend to discourage entrepreneurial activity.

The study finds evidence to support the hypothesis that an achievement-oriented culture has a positive impact on entrepreneurship, which is observed with respect to entrepreneurial intentions and the creation of new (early stage) businesses. Thus, national culture can contribute positively to the dynamism of the entrepreneurial ecosystem in two ways. On the one hand, by fostering latent entrepreneurs who have a more positive perception of their future intention to start a business; on the other hand, by leading to the effective creation of new businesses, even after controlling for the country's economic conditions.

Thus, while entrepreneurial intentions and entrepreneurial action are not synonymous (Sheeran, 2002), it can be seen that both are influenced in the same way by a more achievement-based society, dominated by higher levels of individualism, masculinity, long-term orientation and indulgence (Celikkol et al., 2019; Garcia-Cabrera & Garcia-Sotto, 2008; Hayton et al., 2002).

A more achievement-based society also contributes to reducing the gender gap in entrepreneurship. As pointed out by Pistilli et al. (2023), the gender gap varies between countries and could be explained by different factors. The research suggests that the cultural characteristics of the country are at least partly responsible for these differences in entrepreneurial behaviour between genders.

In line with the barriers for entrepreneurship highlighted in the literature (Figueiredo et al., 2023; Kepler & Shane, 2007; Sena et al., 2012; Winkler & Medeiros, 2011), it is reasonable to assume that the culture of the country is able to influence the social construction held towards entrepreneurship by different individuals, both men and women. In particular, a more achievement-oriented culture seems to contribute to the reduction of barriers to entrepreneurship perceived between genders, thus contributing to the increase of female entrepreneurship in the country and the reduction of the gender gap in entrepreneurship.

On the contrary, a more leniently-dispose culture, as suggested by the few existing literature (e.g. Freitas Santos & Cadima Ribeiro, 2006; Mueller & Thomas, 2001; Rinne et al., 2012), could have the opposite effect on entrepreneurship, whether in terms of intentions, new businesses creation or the gender gap. Despite this pattern, the existing evidence is very weak and does not allow us to confirm the hypothesis that a lenient culture is negatively associated with entrepreneurship at the national level, and more research in this direction is needed in the future.

6. Conclusions and implications

Entrepreneurship is widely recognised as having enormous potential for creating economic and social value. Societies able to stimulate higher levels of entrepreneurial activity among their inhabitants, regardless of gender, tend to have better living conditions. However, there is a huge asymmetry in entrepreneurial activity between countries.

This study contributes to a better understanding of the factors influencing entrepreneurship at the national level by examining the influence of culture on the development of entrepreneurship in a country.

The results suggest that a society characterised by a more achievement-oriented culture is more supportive of entrepreneurship, both in terms of entrepreneurial intentions and activity, and for both genders, thereby helping to reduce the gender gap in entrepreneurship that has been identified in the literature. Societies that present a leniently-dispose culture, on the other hand, tend to discourage entrepreneurial activity, albeit in a way that is not as significant as the positive stimulus provided by a more achievement-oriented culture.

The results obtained could have important practical implications. Firstly, for public administrators, who could design policies to support entrepreneurship that take into account the typology of society and the impact that culture can have on entrepreneurship. Secondly, for higher education institutions, where the knowledge gained could be important for designing more effective entrepreneurship curricula according to the values prevalent in society. Finally, for organisations supporting entrepreneurship in each country's entrepreneurial ecosystem, the findings may have important practical implications for the way they conduct their activities.

There are, nevertheless, some limitations to this research. The main limitation relates to the nature and size of the sample, which is limited by the number of countries participating in the GEM survey, although the sample includes countries with different characteristics and located in different regions of the world.

In the future, it would be worthwhile to study either the impact of national culture on the different motivations for entrepreneurship and also on the characteristics of the new businesses created, including, for example, issues such as sector of activity (new technologies versus traditional activities). Extending the research to other areas of entrepreneurship, especially social entrepreneurship, would also be positive in the future.

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