



Entrepreneurial intentions in the context of a collectivist economy: a comparison between Cuba and Spain

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Abstract

Entrepreneurship research has matured and now spans multiple entrepreneurial contexts, including developing countries, emerging and transitional economies. However, collectivist economies have largely been ignored, partly due to difficulties in conducting research and partly due to the widespread assumption that they remain on the outskirts of entrepreneurial activity. In this paper, from the entrepreneurial event model perspective, we analyse entrepreneurial intention and its antecedents in Cuba, probably the best example of a collectivist economy that exists nowadays. Cuba is compared to Spain, a country that shares historical and cultural features but one which has a developed market economy. Findings indicate that desirability and feasibility constitute the main antecedents of entrepreneurial intention in Cuba, as other studies in market economy countries reflect. However, the influence of desirability on entrepreneurial intention is lower in Cuba compared to Spain, where the values of desirability and feasibility are significantly greater. These results seem to indicate that due to Cuba's level of development, political regime and collectivist culture, entrepreneurship arises mainly out of necessity and the emergence of a strong entrepreneurial culture is stifled. This reflects a similar situation to the result obtained in previous studies in developing countries.

Keywords Collectivist economy · Entrepreneurial context · Entrepreneurial intention · Entrepreneurship · Cuba · Desirability · Feasibility · Entrepreneurial event model

Introduction

Entrepreneurial Intention (EI hereinafter) is widely recognised as the main antecedent of entrepreneurial behaviour and therefore a key concept in the study of

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entrepreneurship phenomena (Fitzsimmons and Douglas 2011). Indeed, “the more we study intentions, the more we need to look deeper at where intention actually arises” (Kaffka and Krueger 2018; 205). Thus, EI continues to be among the most researched concepts to understand the entrepreneurship process and its impact on venture creation and economic growth (Kaffka and Krueger 2018; Liñán and Fayolle 2015; Gupta et al. 2016).

A literature review shows that out of all the different theoretical models proposed, the entrepreneurial event model (EEM hereinafter) suggested by Shapero (1975) and Shapero and Sokol (1982) constitutes one of the main tools to explain entrepreneurial intention by providing an analysis of the basic antecedents of individuals’ entrepreneurial intentions through their perceptions of desirability and feasibility (Schlaegel and Koenig 2014). Taking this perspective as a starting point and adopting a cognitive approach, the Theory of Planned Behaviour (TPB hereinafter) assimilates personal attitudes to perceived desirability, perceived behavioural control, perceived feasibility and introduces subjective norms. These norms are defined as the perceptions of other people’s opinions of entrepreneurial behaviour and are considered the third antecedent of entrepreneurial intention (Ajzen 1987, 1991, 2001, 2002). Krueger (1989, 1993) tested the model empirically, and then several works generalized and better conceptualized it to apply it to the entrepreneurship process (Krueger and Brazeal 1994; Krueger and Carsrud 1993).

Adopting these perspectives as the main theoretical framework, multiple studies have been carried out in the field of entrepreneurship to explain and predict a large number of entrepreneurial intentions and behaviours (Lortie and Castogiovanni 2015). More precisely, Kaffka and Krueger (2018) estimate that EI research has grown more than 30 times as fast as entrepreneurship research since the 1990s up to now. These analyses have not only allowed a better understanding of the entrepreneurial process from a theoretical point of view but have also helped develop an important knowledge base in entrepreneurship education and pedagogical methods to improve students’ entrepreneurial intentions (Nabi et al. 2017; Peterman and Kennedy 2003).

Up till now, most studies have been carried out in developed economies with a consolidated entrepreneurial culture (Kaffka and Krueger 2018; Lortie and Castogiovanni 2015). In addition, several studies on entrepreneurial intention and its antecedents have been conducted in transitional economies, which according to the definition of Aidis (2005) are countries that have abandoned collectivist systems in the past and are in the process of becoming developed economies (González-Corzo 2014; Iakovleva 2011; Shook and Bratianu 2010; Naktiyok et al. 2010; Shook and Bratianu 2010). These works, from an entrepreneurial research perspective (Spigel 2017; Zahra et al. 2014), have focused on trying to explain the effects of social, political, economic, and cultural elements on entrepreneurial actions and their outcomes. According to this perspective, these contextual influences are believed to pervade and influence the micro processes that give entrepreneurial actions their substance and potency (Zahra et al. 2014; 480).

However, there have been a lack of studies on countries that are embedded in a collectivist economic system, such as the Cuban socialist model (Ana and Lubiński 2019; González-Corzo 2014; González-Corzo and Justo 2015). According to Luu and Ngo (2019), collectivist economies could be characterised by the presence of a culture that does not appreciate independence, competitiveness and individualism. This tends

to inhibit company performance and levels of innovativeness. Additionally, governments in these economies remain in control of a significant portion of the scarce resources available, which may constrain the effectiveness of companies' proactive practices. As Luu and Ngo (2019) suggest, the combination of these characteristics would lead us to expect the existence of specific features in entrepreneurial orientation and entrepreneurial processes in these collectivist contexts.

Therefore, this study tries to cover this existing gap in the literature, that is to say, to analyse entrepreneurial intention and its antecedents in a collectivist economy and determine to what extent there are differences with respect to a developed and conventional economy (Zahra et al. 2014). To do so, the EEM (Shapero 1982) is adopted as a theoretical framework instead of TPB for two reasons. On the one hand, different empirical studies have found little evidence of the influence of subjective norms on entrepreneurial intentions, which is the main difference between both models (Fitzsimmons and Douglas 2011; Shook and Bratianu 2010; Krueger et al. 2000; Li 2007) or have even reported no significant relationship at all (Liñán and Chen 2009; Autio et al. 2001; Krueger et al. 2000). In addition, taking into account that the context to be analysed is a collectivist economy with a very limited market culture, this study is rooted in the basic and predominant view of Shapero's EEM, which assumes that entrepreneurial intentions are a function of perceived desirability and feasibility. Furthermore, the model is tested in Cuba, probably the best example of a collectivist economy existing nowadays. As in other studies on the characteristics and variables of entrepreneurship in little studied geographical or cultural contexts (e.g. Lopes et al. 2018; García-Rodríguez et al. 2015; Liñán and Chen 2009), Cuba is compared with a developed economy with which it shares multiple cultural and historical features in order to isolate the influence of the collectivism effect, namely Spain.

This paper is organized as follows. In the following section, we present the theoretical context and the hypotheses to be tested in relation to the characterization and antecedents of EI in a collectivist economy compared to a developed economy. We subsequently present the measurement model, our sample and methodological approach, before reporting the empirical results. Lastly, we conclude with our main contributions and discuss the implications of this study for further research.

Entrepreneurial intention in Cuba as a collectivist economy

Collectivist economies constitute an unexplored context in entrepreneurship research in general, and, specifically, in entrepreneurial intention analysis (Luu and Ngo, 2019). Cuba is probably the best example of such an economic system nowadays considering its specific features from a historical, geopolitical, geographic, and demographic perspective (Hershberg 2014). The only exceptions to this would be several studies on China (Xu et al. 2018; Su et al. 2019; Lin et al. 2019). However, the analyses carried out there have been from a regional perspective and at an aggregate level of analysis, without attempting to explain EI and its antecedents.

According to the definition of Aidis (2005) of a transitional economy, highlighting the switch from a centrally planned economic system to a market oriented one, Cuba would be far from being considered transitional. However, driven by the imperative of survival, the Cuban State today considers self-employment as a valid contribution within Cuban Socialism to economic development (Concepción 2016), although

avoiding the excesses of small enterprise, which are considered counter revolutionary (Scarpaci et al. 2016).

Between the years 1959 and 2008, all Cuban citizens were government employees under the political and economic policies dictated by the public authorities, and entrepreneurship was a concept unknown in the common vocabulary of the country (Ritter 2014). It is after this period that the Cuban government started allowing its citizens to apply for a self-employed license. Such a worker is named a “self-employed worker” (SEW) and is allowed to set up private enterprises by paying a periodic fee to the government. SEWs are defined as those workers who, whether or not they own their means and objects of work, are not subject to an employment contract with legal entities but are registered with the National Tax Administration Office, where they pay their taxes as established by the current Legislation (ONEI 2019). The SEWs are the nearest in name and function to an entrepreneur that we can observe nowadays in the Cuban economy. By contrast, cooperative members are those workers who belong to entities created by agreement of their members in order to produce and market their products collectively and subsequently distribute the benefits obtained among them.

According to the Cuban information and statistics national office (ONEI 2019), as can be seen in Table 1, the number of SEWs has tended to remain stable over recent years at around 600,000 people. It is the most important category of non-state workers, representing approximately 10% of the total workforce, above the percentage of cooperative members (8%). However, most Cuban workers remain working in the state sector, which represents 76% of the total workforce. There are several constraints that explain why there has not been a greater development of the SEW sector. These include an onerous tax system, scarcity of financial resources due to underdeveloped banking and financial sectors, the lack of access to organized input markets and a hostile business climate (González-Corzo and Justo 2015).

The EEM of Shapero (1975) and Shapero and Sokol (1982) and the TPB proposed by Ajzen (1987, 1991, 2001, 2002) and tested by Krueger (1989, 1993) are the main perspectives adopted in entrepreneurship research to explain EI. Both perspectives share the main assumption that EI is the single and best predictor of entrepreneurial behaviour. Schlaegel and Koenig (2014), integrating both models, found that EEM and TPB offer a clear theoretical foundation and strong explanatory power for EI.

EEM and TPB have largely been applied to understand better multiple entrepreneurial contexts influenced by cultural or developmental features, delving further and

Table 1 Cuban workers employed in economic activities according to sector (thousands)

	2015		2016		2017		2018	
State workers	3460.1	73.4%	3262.1	71.1%	4474.8	76.3%	4482.7	76.0%
Non-state workers	1253.6	26.6%	1329	28.9%	1387.3	23.7%	1415.7	24.0%
<i>Cooperatives</i>	531.3	11.3%	446.7	9.7%	476.9	8.1%	469.9	8.0%
<i>Self-employed workers (SEW)</i>	499	10.6%	540.8	11.8%	583.2	9.9%	580.8	9.8%
<i>Rest of non-state workers</i>	223.3	4.7%	341.5	7.4%	327.2	5.6%	365	6.2%
Total number of people in work	4713.7	100.0%	4591.1	100.0%	5862.1	100.0%	5898.4	100.0%

Source: ONEI (2019)

further into what lies beneath intention (Kaffka and Krueger 2018), with a good example being the GUESSS (Sieger et al. 2011) and GEM (Reynolds et al. 2005) research projects. In this sense, EI has been analysed in less developed economies (e.g. Al-Jubari et al. 2019; Karimi et al. 2015; García-Rodríguez et al. 2015; García-Cabrera and García-Soto 2008;) and transitional economies (Nguyen et al. 2015; González-Corzo 2014; Iakovleva 2011; Naktiyok et al. 2010; Shook and Bratianu 2010).

According to Shapero (1975) and Shapero and Sokol (1982), desirability and feasibility are direct antecedents to entrepreneurial intention. After the initial validation (Audet 2002, 2004; Krueger et al. 2000), this theoretical model has been tested in very different contexts over recent decades and has been found to have strong explanatory power (Kaffka and Krueger 2018; Lortie and Castogiovanni 2015; Schlaegel and Koenig 2014). Indeed, in the majority of studies the only two main determinants of EI considered have been perceived desirability and perceived feasibility (Schlaegel and Koenig 2014). Specifically, different works have been carried out in developing countries and in transitional economies (Al-Jubari et al. 2019; García-Rodríguez et al. 2015; Iakovleva 2011; Naktiyok et al. 2010; Shook and Bratianu 2010) and all of them conclude that desirability and feasibility are antecedents of EI.

Moreover, previous descriptive works conducted in collectivist economies emphasize that these countries could be considered as some of the most entrepreneurial societies ever, since citizens are often forced to become entrepreneurs in even the most mundane facets of everyday life to survive (Rehn and Taalas 2004). In the specific case of Cuba, according to Ritter (2014; 111), “citizens in their everyday lives have to behave in an entrepreneurial manner as people have to explore continuously and evaluate new economic opportunities to acquire the consumer goods they and their families need, to sell consumer goods or services, to bear the uncertainty, face risk and take ultimate responsibility, and to invest in the maintenance of their supply and market networks, all under hard and unforgiving budget constraints”.

According to Scarpaci et al. (2016), Cubans’ “mundane entrepreneurship” has already provided thousands of Cubans with material benefits in a society where material scarcity is rampant and which will be the basis for a future increase in the demand for working outside the state system after the next reforms (which probably will not be antithetical to a socialist agenda).

From a wider point of view, preliminary studies developed in collectivist contexts (Luu and Ngo, 2019) find that entrepreneurial orientation and its dimensions, such as innovativeness, proactiveness and risk taking are related in the similar way than in a developed economy, at least in the first steps of entrepreneurial development. Based on this logic, two hypotheses to be tested would be the following:

H1: Desirability will positively influence entrepreneurial intentions in Cuba.

H2: Feasibility will positively influence entrepreneurial intentions in Cuba.

Although desirability and feasibility are expected to be the main antecedents of EI, according to the general model of behaviour of Shapero (1975) and Shapero and Sokol (1982), in previous contexts where it has been tested, as in developing countries (e.g. García-Rodríguez et al. 2015; Iakovleva 2011) or in transitional economies (e.g. Shook and Bratianu 2010) differences in the levels of EI and its antecedents compared to developed countries have been observed. Moreover, differences have been found by

studies that compare the Latin American context with western developed countries in the sense that the latter show a higher average value of a set of variables related to entrepreneurial intention (Lopes et al. 2018).

On the other hand, studies carried out in Cuba up till now demonstrate that entrepreneurship in the country is mainly informal and located outside of the main market (Concepción 2016; Scarpaci et al. 2016). Indeed, any formal entrepreneurship remains highly regulated (Ana and Lubiński 2019; Hershberg 2014; Ritter 2014), and consequently the process of establishing an emerging entrepreneurial class is very weak (Grossman et al. 2018; Scarpaci et al. 2016; González-Corzo 2014). Moreover, from a social and cultural perspective, according to Scarpaci et al. (2016), much of Cuban society would view profit making and wealth accumulation that comes with successful entrepreneurship activity as socially offensive, even if presently necessary. This suggests the following hypotheses:

H3: The value of Entrepreneurial Intention is greater in Spain compared to Cuba.

H4: The value of Desirability is higher in Spain compared to Cuba.

H5: The value of Feasibility is higher in Spain compared to Cuba.

Different studies into EI have found that the influence of its antecedents depends on the social, economic, or cultural context (e.g. Grossman et al. 2018; García-Rodríguez et al. 2015; Díaz-Casero et al. 2012; Liñán et al. 2011; Iakovleva 2011; Liñán and Chen 2009).

Indeed, EI's diverse history and multiple contexts make regional categorizations complex (be it in the Caribbean, Latin America or former Soviet Bloc). However, according to Hofstede's five dimensions that distinguish cultural differences among countries or regions (Hofstede 1984), Cuban entrepreneurial culture could be characterized as more collective than Spanish, despite their common past, since most Cuban entrepreneurship initiatives involve a family structure (Ana and Lubiński 2019; Grossman et al. 2018).

Moreover, according to Grossman et al. (2018), Cuban entrepreneurs are basically motivated by the chance to improve their situation and increase income in order to provide a better life for themselves and their families. In a context of subsistence economy like Cuba, the lack of everyday products, or power and water shortages are the main explanation for business development in the country (Ana and Lubiński 2019). In fact, the Cuban rationing system itself, in which everyone receives essentially the same rations, forces many people into becoming mini capitalists searching for opportunities to sell and buy (Ritter 2014). In Cuba, the main reason for choosing the self-employment option has been not a lack of job offers, but the low incomes in the formal sector (Concepción 2016).

Moreover, the few previous studies developed on collectivist economies have showed that too much focus on entrepreneurial innovativeness or proactiveness may be counterproductive to entrepreneurship activity, leading to decreases in the level of performance (Luu and Ngo 2019). In this sense, collectivist cultures would tend to penalize firms' efforts to stand out, and it would create market unpredictability due to the coexistence of two antagonistic and contradictory ideologies, the socialist and the capitalist ones (Tang et al. 2008).

Taking it into account its level of development, the political regime and the collectivist culture of the country, Cuban entrepreneurship can, thus, be mainly

attributed to reasons of necessity (Thurik and Wennekers 2004; Sternberg and Wennekers 2005; Wennekers et al. 2002). Therefore, the perceived desirability of being an entrepreneur, the degree to which an individual holds a positive or negative personal preference about entrepreneurial behaviour (Liñán et al. 2011) would play a less important role in EI in Cuba, compared to a developed country like Spain. In fact, it would be reasonable to expect that differences would exist in the effect on EI of its antecedents according to the following hypotheses:

H6: The positive relationship between Desirability and Entrepreneurial Intention is stronger in Spain compared to Cuba.

H7: The positive relationship between Feasibility and Entrepreneurial Intention is stronger in Cuba compared to Spain.

Methods

Measures, sample and data analysis

A quantitative research method has been designed. Table 2 shows the items used to measure the different scales. All of which were measured by a 7-point scale regarding level of agreement (1 = totally disagree to 7 = totally agree). Entrepreneurial intention is measured by two items related to the probability and preference of starting up a firm compared to working as an employee. Considering there is no consensus in the literature about using pure-intention (Liñán and Chen 2009) or self-prediction measures

Table 2 Results of the differences in student's t test

Construct/Associated items	Spain		Cuba		Sig.
	Mean	STD	Mean	STD	
EI Entrepreneurial Intention					
EI1 Do you think that one day you will start up a firm?	3.23	1.56	2.56	1.78	0.000 ***
EI2 Among your alternatives for future work. Would you prefer to start up a firm or work as an employee?	3.62	1.98	2.94	0.00	0.000 ***
DE Desirability					
DE1 Do you think you would enjoy starting up a firm?	2.44	1.52	1.67	1.28	0.000 ***
DE2 What do you think about the people who start up firms?	2.06	1.15	1.37	0.93	0.041 **
DE3 To what degree would the idea of starting up a firm make you enthusiastic?	2.34	1.38	1.71	1.30	0.000 ***
FE Feasibility					
FE1 To what degree do you feel sure about being successful with it?	3.57	1.30	2.81	1.40	0.000 ***
FE2 To what degree do you have confidence in yourself to start up a firm?	3.16	1.39	1.97	1.14	0.000 ***

Scale 1 to 7 (1 = total disagreement and 7 = total agreement)

Significance level: <0,01***; <0,05 **; <0,1 *; not significant "ns"

(Douglas and Fitzsimmons, 2012) of EI, our measures are based on the intention and preference of the individual and have been tested in previous studies that compared EI in different regional contexts such as in García-Rodríguez et al. (2015). To measure the scales of Desirability and Feasibility, the proposals of Kolvereid (1996a, 1996b) were used. This scale was later adapted by Peterman and Kennedy (2003) and tested by García-Rodríguez et al. (2015) in a developing country context.

Entrepreneurial Intention and Feasibility are measure by two items and Desirability by three items. According to Raubenheimer (2004), it is possible to have latent constructs with 2 observed variables only, if the reliability is adequate. In addition, since they are reflective variables, the items can be reduced while still giving meaning to the latent variable, since the measurement properties are less restrictive with PLS, and constructs with fewer elements can be used (Hair et al. 2014). This study was conducted within the context of university students, specifically the University of La Laguna (ULL) in Spain and the University of Holguín (UHo) in Cuba. We analysed data from surveys conducted on students in their last year of the degrees of *Industrial Engineering, Accounting and Finance, and Business Administration* during the months of November and December of the 2017–2018 academic year. The survey process was carried out in the classroom, after explaining the objective of the study to both the professor and students, who then voluntarily answered the questionnaire. In total, 484 valid responses were obtained of which 248 belonged to Spanish students (ULL) and 236 to Cuban students (UHo). This represents a response rate with respect to those enrolled in the degrees participating in the study of 66.7% and 82.8% in Spain and Cuba, respectively. By gender, 37.9% in Spain and 38.1% in Cuba are men and 62.1% and 61.9% respectively are women. By age, 59.3% in Spain and 24.2% in Cuba are between 19 and 21 years of age, while those over 21 years of age represent 40.7% and 75.8% of the sample, respectively. Based on the data obtained, a sample error of 3.61% (ULL) and 2.65% (UHo) was estimated for a 95% confidence level. Most of the participating students did not have professional experience, with only 22% (ULL) and 25% (UHo) saying they had some previous work experience.

To verify that the sample size is sufficient, G * Power has been used (Faul et al. 2009), which suggests that for the test of the proposed model (3 predictors) a minimum sample of 119 individuals is required for a statistical power of 0.95, so it can be safely concluded that the sample size used for both samples is acceptable for the purposes of this study.

To analyse the proposed theoretical model and perform the MGA and test the hypotheses, the Partial Least Squares technique (PLS-SEM) was used with the Smart PLS software v.3.2.8 (Ringle et al. 2015). PLS has been used because it does not impose any specific distribution assumptions (e.g. normality) for the indicators and does not need the observations to be independent of each other (Chin 2010). Furthermore, PLS can estimate structural models with small samples (Chin and Newsted 1999; Reinartz et al. 2009), as is the case here. First, the measurement model was analysed by calculating the reliability and validity of the constructs, as well as the structural model through R^2 , trajectory coefficients and confidence intervals. After the evaluation of the structural and measurement model, two different non-parametric methods were used to test the differences in the relationships between the constructs between the two groups (Spanish students and Cuban students): the Henseler MGA (Henseler et al. 2009) and the permutation test (Chin and Dibbern 2010). In addition, before performing the

Multigroup Analysis (MGA), the invariability of the measurement was evaluated using measurement invariance analysis (MICOM), a new approach developed for PLS-SEM.

Study results

EI and its antecedents

Table 2 shows the results of the descriptive analysis (mean, standard deviation and t-test of difference of means) of the items of the constructs of the model proposed for each of the groups of students analysed (Spain and Cuba). As you can see, all the items of the constructs obtain a higher score among Spanish students than for Cuban students. These differences are significant in all cases (Students' t-test). The averages of Entrepreneurial Intention items have values between 3.23 and 3.62 for Spanish students, while for Cuban students, the values are between 2.56 and 2.94. The average of Desirability items for Spanish students are between 2.06 and 2.44 and for Cuban students between 1.37 and 1.67. For the Feasibility items, values are 3.16 and 3.57 for Spanish students and 1.14 and 1.40 for Cuban ones. These results confirm hypotheses 3, 4 and 5.

Model assessment using PLS-SEM

In order to assess the model in Spanish and Cuban students using PLS-SEM and to compare the results of the estimated path coefficients, the current study employs a three-stage approach to analysis: assessment of measurement models, assessment of structural models, and MGA.

Assessment of measurement model

In first stage of analysis, the acceptability of the measurement models for Spanish and Cuban students must be confirmed (Hair et al. 2014). Assessment of the measurement model entails an evaluation of the validity and reliability of the model's latent variables (LVs). Validity, in turn, comprises two types: convergent and discriminant. Evaluating the reliability and validity of the model involves assessing the relationships between the LVs and their associated items, which is done by way of two key coefficients: composite reliability (CR) and average variance extracted (AVE) (Chin 2010; Hair et al. 2011).

The measurement model used in this study included three constructs: Entrepreneurial Intention, Desirability and Feasibility. In assessing a model's reliability, the loading of each indicator on its associated LV must be calculated and compared to a threshold. Generally, the loading should be higher than 0.7 for indicator reliability to be considered acceptable (Hair et al. 2011).

A loading lower than 0.4 indicates that an item should be considered for removal, and items with a loading of 0.4–0.7 should be considered for removal if they increase the CR and AVE above the threshold (Chin 2010; Hair et al. 2011). Table 3 indicates that most of the indicator loadings on their corresponding LVs for the respondents of two groups were higher than 0.7. Several indicators load between 0.4 and 0.7, indicating that they might be considered for removal based on the CR and AVE.

Table 3 Assessment results of the measurement model

Construct/Items	Loading		Composite reliability		AVE	
	Spain	Cuba	Spain	Cuba	Spain	Cuba
EI			0.899	0.795	0.817	0.661
EI1	0.927	0.758				
EI2	0.881	0.865				
DE			0.847	0.882	0.653	0.715
DE1	0.855	0.867				
DE2	0.668	0.802				
DE3	0.884	0.866				
FE			0.872	0.861	0.774	0.756
FE1	0.881	0.861				
FE2	0.878	0.878				

The CR coefficient is also used for assessing construct reliability and should be higher than 0.7 to establish construct reliability (Chin 2010; Hair et al. 2011). Table 3 indicates that the CR for all LVs in the measurement model for both groups are higher than 0.7. These results indicate that the measurement model possesses acceptable reliability. In order to assess the convergent validity of the measurement model for both groups, the AVE of the LVs should also be higher than 0.5 for their convergent validity to be considered acceptable (Chin 2010; Hair et al. 2011). Table 3 shows that the AVE of the constructs is higher than 0.5; therefore, convergent validity is acceptable.

Table 4 show the results of the discriminant validity of the measurement models using the Fornell–Larcker criterion (Chin 2010; Hair et al. 2014) and the HTMT.85 ratio (Henseler et al. 2015). Results indicate that each groups’ model possesses acceptable discriminant validity.

Table 4 Discriminant validity

Spain			Cuba			
Fornell-Larcker Criterion						
	DE	EI	FE	DE	EI	FE
DE	0.808			0.845		
EI	0.669	0.904		0.407	0.813	
FE	0.513	0.599	0.88	0.501	0.471	0.869
Heterotrait-Monotrait Ratio (HTMT)						
	DE	EI	FE	DE	EI	FE
DE						
EI	0.822			0.606		
FE	0.666	0.794		0.653	0.800	

Note: the square roots of the AVEs are shown diagonally in bold

Assessment of the structural model

In the second stage of the analysis, structural models for Spanish and Cuban students were evaluated. To evaluate the structural model, the R^2 value of the endogenous constructs was calculated as indicative of the explanatory power of the model (Hair et al. 2014). The R^2 values for the variable explained “Entrepreneurial Intention” were 0.537 in Spanish students and 0.261 in Cubans. An R^2 value of 0.2 is relatively high and acceptable for behavioural research standards (Hair et al. 2014).

Table 6 and Fig. 1 show the results of structural model assessment and hypothesis testing using 5000 bootstrap resamples and 5000 permutations. The results for both groups, Spanish and Cuban, show that Desirability and Feasibility have a positive and significant effect on Entrepreneurial Intention, which confirms Hypotheses 1 and 2.

Multigroup analysis (MGA)

In accordance with the MICOM procedure (Henseler et al. 2016), we established the partial measurement invariance of both groups (Table 5), which is a requirement for comparing and interpreting the MGA specific differences of PLS-SEM results (Henseler et al. 2016).

Table 6 shows the results of the assessment of the structural model and MGA using two nonparametric methods: Henseler’s MGA (Henseler et al. 2009) and the permutation test (Chin and Dibbern 2010). These are considered to be the most conservative PLS-SEM techniques for the assessment of differences between path coefficients between two groups (Sarstedt et al. 2011). Henseler’s MGA directly compares group-specific bootstrap estimates from each bootstrap sample. According to this method, a p value of differences between path coefficients lower than 0.05 or higher than 0.95 indicates a 5% level of significant differences between specific path coefficients for the two groups (Henseler et al. 2009; Sarstedt et al. 2011). The permutation test also returns a p value; however, differences are only at the 5% level of significance if the p value is smaller than 0.05.

Using both Henseler’s MGA and the permutation method, the results of the MGA indicate significant differences in the positive and significant effects of Desirability on Entrepreneurial Intention. The effects are higher for Spanish students than for Cuban

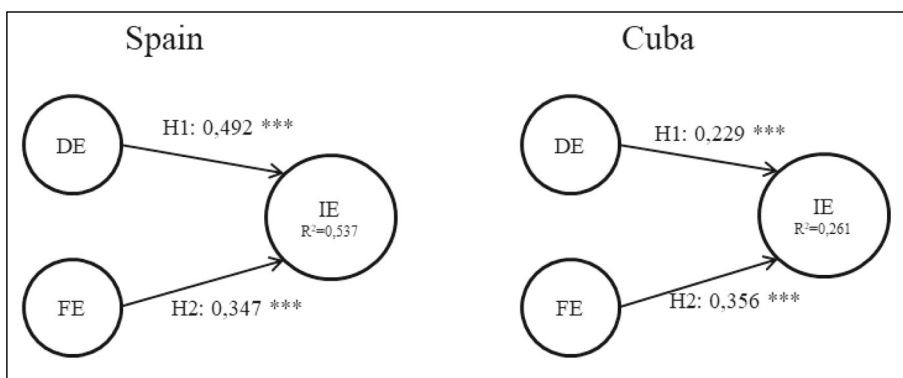


Fig. 1 Results of analysis for Spanish and Cuban students. Significance level: *** $p < 0.001$.

Table 5 Result of invariance measurement testing using permutation

Constructs	Configural invariance (same algorithms for both groups)	Compositional invariance (Correlations = 1)		Equal mean assessment			Equal variance assessment				
		C = 1	Confidence interval	Partial measurement invariance established	Differences	Confidence interval	Equal	Differences	Confidence interval	Equal	
											invariance established
DE	Yes	1.000	[0.995, 1.000]	Yes	0.644	[-0.149, 0.151]	No	0.158	[-0.298, 0.308]	Yes	No
EI	Yes	0.994	[0.994, 1.000]	Yes	0.455	[-0.147, 0.149]	No	0.081	[-0.169, 0.172]	Yes	No
FE	Yes	1.000	[0.996, 1.000]	Yes	0.797	[-0.151, 0.148]	No	0.116	[-0.203, 0.206]	Yes	No

Table 6 Results of relationship between EI and its antecedents - hypotheses testing

Relationships	Path coefficients		Path coefficient difference				p value difference (One-Tailed)		Supported
	Spain	Cuba	H1	H2	Henseler's MGA	Permutation Test	Henseler's MGA	Permutation Test	
DE -> EI	0.492 ***	0.229 ***	H1 Yes	H2 Yes	0.000 ***	0.000 ***	0.000 ***	0.000 ***	Yes/Yes H6
FE -> EI	0.347 ***	0.356 ***	H1 Yes	H2 Yes	0.550 ns	0.913 ns	0.550 ns	0.913 ns	No/No H7

In Henseler's MGA method, the p value lower than 0.05 or higher than 0.95 indicates at the 5% level significant differences between specific path coefficients across two groups
 Significance level: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ns no significance

ones. However, the results indicate no significant differences in the effect of Feasibility on Entrepreneurial Intention across both groups.

Therefore, the results confirm hypothesis 6, although hypothesis 7 cannot be supported. Both methods of MGA analysis used in this study confirm the significance/non-significance of the results for differences between Spanish and Cuban students, with this “multimethod confirmation” increasing the credibility of the results.

Discussion and conclusions

This work has contributed to filling a gap in entrepreneurship literature by analysing the entrepreneurial intention and its antecedents in a collectivist economy and determining to what extent there are differences with respect to a developed and market economy. It has been conducted in Cuba, probably the best example of a collectivist economy existing nowadays (Hershberg 2014) and adopting the EEM (Shapiro 1982) as a theoretical framework.

From a theoretical point of view, the present work has contributed to test the EEM in an unexplored environment, like a collectivist economy. Thus, extending EEM’s application further in understanding multiple entrepreneurial contexts influenced by diverse cultural or developmental features, after previous applications to less developed economies and transitional economies. Findings obtained indicate that there are no differences between a collectivist economy and market economy countries regarding the antecedents of entrepreneurial intention, with desirability and feasibility being the main explanatory variables. This contributes by validating and generalizing the important research field of entrepreneurial intentions developed since 1980s from social psychology and the entrepreneurial event model (Kaffka and Krueger 2018). These results are similar to those obtained in less developed economies (e.g. Karimi et al. 2015; García-Rodríguez et al. 2015; García-Cabrera and García-Soto 2008) or transitional economies (González-Corzo 2014; Iakovleva 2011; Naktiyok et al. 2010; Shook and Bratianu 2010).

However, significant differences are observed in the values of desirability and feasibility of entrepreneurial intention, with values lower in Cuba for these variables compared to a market economy. These results seem to indicate that despite the existence of “mundane entrepreneurship” in Cuba, as described by Scarpaci et al. (2016), in the same way as in other collectivist economies, citizens are forced to become self-entrepreneurs in the most mundane facets of everyday life (Rehn and Taalas 2004). This entrepreneurship is mostly informal, located in the grey economy (Concepción 2016; Scarpaci et al. 2016), whereas any formal entrepreneurship activity is highly regulated (Ana and Lubiński 2019; Hershberg 2014; Ritter 2014). All these characteristics seem to prevent the emergence of an entrepreneurship culture that could reinforce entrepreneurial intention and its antecedents.

Contribution to literature on entrepreneurial intentions

This study’s results differs from those obtained in previous research carried out in developing countries, where the values of desirability and feasibility are greater than in developed countries (e.g. García-Rodríguez et al. 2015; Iakovleva 2011). These results

also differ from those indicated by Minto-Coy et al. (2018) in their analysis of the Caribbean Region compared to a selection of developed countries, as fear of failure was lower in the Caribbean, while entrepreneurial intention was higher. It seems to indicate that the differences in the Cuban case could be based on the political and cultural restrictions to the entrepreneurial activities despite Cuba's proximity to developing economies from an economic point of view and to Caribbean countries from historical reasons.

In addition, the influence of antecedents in the intention of starting up a business differs in Cuba compared to a market economy. In Cuba, feasibility is the main antecedent, whereas in Spain, desirability is the best predictor of entrepreneurial intention, with the differences between both contexts being significant for desirability. This result seems to indicate that due to Cuba's level of development, political regime and collectivist culture, entrepreneurship is mainly out of necessity, which is similar to the result obtained in previous studies in developing or other collectivist culture countries (e.g. García-Rodríguez et al. 2015; Liñán and Chen 2009).

Contribution to the policy debate

These findings, according to Urbano et al. (2019), could have practical implications for designing and implementing institutional policies to go forward with the economic reforms started in the last decade in Cuba in order to promote entrepreneurial activity and, in particular, for entrepreneurial education. In this sense, it appears that in a collectivist economy reducing obstacles to business activities and improving perceived levels of feasibility would have a greater impact on individuals' entrepreneurial intention than trying to improve individuals' perception of desirability. It seems to confirm the fact highlighted by Minto-Coy et al. (2018) about governments in the Caribbean in the sense that their efforts to stimulate entrepreneurship have placed too much weight on self-employment and insufficient weight on innovation, risk-taking and high value activities.

This also coincides with the results and recommendations of Lin et al. (2019) in China for government agencies to institute policies aimed at vigorously improving the business environment and strengthening the financial system to further enhance the positive effect of entrepreneurship on poverty alleviation. Obviously, the feasibility to do so in Cuba depends greatly on the real willingness of the political system to open up entrepreneurial activity more widely in the future.

Limitations and future research

This study has certain limitations that open up new avenues of research. First, the sample used was made up of university students and although these are commonly used in research into entrepreneurial intention (Kaffka and Krueger 2018), it would be of interest to widen the scope of the study to the rest of the adult population, even to entrepreneurs. Second, the research has been transversally designed, which limits causal inferences and requires further empirical studies based on long-term perspectives, especially taking into account the reforms that can be expected in the Cuban economy in the coming years.

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