administrative sciences

MDPI

Article

Entrepreneurial Intentions in Students from a Trans-National Perspective

Alexander Ward [1], Brizeida Hernández-Sánchez [2] and Jose C. Sánchez-García [2,*]

[1] Department of Entrepreneurship, University of Salamanca, 37005 Salamanca, Spain; alexander.ward@usal.es
[2] Department of Social Psychology, University of Salamanca, 37005 Salamanca, Spain; brizeida@usal.es
* Correspondence: jsanchez@usal.es; Tel.: +34-923-294-500 (ext. 3264)

Received: 29 March 2019; Accepted: 28 April 2019; Published: 1 May 2019

Abstract: Studying the variability of entrepreneurial attitudes within different countries is important in order to identify where attempts to increase entrepreneurial spirit and activity should focus. This article analyzes differences within multiple countries, as well the causal relationship of three attitudinal variables, namely, perceived behavioral control, subjective norm, and entrepreneurial motivations with entrepreneurial intention. We used a cross-national framework and analyzed the relation of four different countries with a sample of 800 students from Argentina (200), Chile (200), Panama (200), and Spain (200). Results show variability in all attitudes between countries with Panama rating the highest in most and Spain rating the lowest. Motivations expressed for entrepreneurship are not statistically significant between most countries, which suggests the perception of entrepreneurship as an engine for personal goals is high and similar in all four countries. Regression analysis showed subjective norm's effect is not statistically significant in Argentina nor Chile for intentions, and Panama's intentions are highly driven by entrepreneurial motivations. These suggest policies and programs should tap on the fairly consistent entrepreneurial spirit to capitalize on student's interest in entrepreneurship, and pull them into training programs to strengthen their competences.

Keywords: international; entrepreneurship; intentions; students; university

1. Introduction

Entrepreneurship is commonly considered an engine of innovation and social growth, but it does not happen in a vacuum. More so, different environments can bring different realities in societies, meaning the degree of entrepreneurship is not always consistent due to the variability within the factors that make it a feasible option.

For example, we can find variability between Chile, which enjoys extremely high Total Early-Stage Entrepreneurial Activity (TEA) 25.06 and development, and its neighbor, Argentina, creator of many of the prominent enterprises in Latin America, which has declining (and currently extremely low) TEA values and entrepreneurial spirit, according to the latest Global Entrepreneurship Monitor report (GEM 2018). Nonetheless, comprising of a heavily educated population (Pradilla 2012) and newly-implanted law called Entrepreneur's Law, similar to Chile's Law of Business in One Day, Argentina follows its neighbor's footsteps to improve its entrepreneurship ecosystem (Cruz 2017).

On the other hand other countries like Panama, while showing sub-standard entrepreneurial intentions, perceived capabilities and TEA, in relation to their regional neighbors, show a substantially higher motivational index due to their attempts to promote entrepreneurship through business accelerators like Micro, Small and Medium Sized Business Authority (AMPYME). Contrary

to logic, highly developed, innovation-stage countries with high links to Latin America, like Spain, due to economic constraints and high bureaucracy, show substantially lower values than previously mentioned countries.

In sum, each country's context creates different, ever-changing, entrepreneurship realities, which also translate to attitudes. Because of this, it is important to understand and regularly assess the entrepreneurial mindset within different geo-political structures, instead of using a one-size-fits-all model to explain the entrepreneurship reality in each. This is also specifically relevant in educational settings, which is commonly attributed part of the entrepreneurship activity given its nature to train and create knowledge, which translates to spillover and spin-offs (Acs et al. 1994; Caiazza et al. 2014). Most of these countries also share the status of being developing countries, which entrepreneurship has shown to reduce poverty of, more so through education (Khadeeja et al. 2017)

This article comes as a response to further understand and update the variability of entrepreneurial attitudes and how they impact intentions, analyzing models using a trans-national framework by exploring to what degree people's motives for entrepreneurship, as well their perceived behavioral control and social support impact intentions for business in four different countries: Argentina, Chile, Panama, and Spain.

This article structure is as follows: In Section 2, we present our literature review on the importance of entrepreneurship, intention models, as well as attitudes. In Section 3, we describe our sample, scale, and delineate the method used, followed by Section 4 with the results. Lastly, in Section 5, we discuss our results and suggest future research directions.

2. Literature Overview

2.1. Socioeconomic Background of Argentina, Chile, Panama, and Spain

Entrepreneurship literature states that entrepreneurship, as a variable, is highly contextual (Sánchez-García et al. 2018). We expect the countries under this study to experience different socioeconomic phenomena, which can translate to differences in entrepreneurship activity, behavior and attitudes.

Argentina has been historically one of the top business centers of the Latin America region, with many well-known startups, such as Mercado Libre and Despegar. It was also a considerably prosperous country in terms of indicators of wealth and low poverty levels (World Bank 2005), until a series of economic downfalls that started in 1970's. These have dampened the growth of the country for over three decades, which despite some minor progressions currently suffers from high levels of inflation (Cohen 2018). Argentina has been trying to improve its business environment by implementing the Entrepreneur's Law, which mimics Chile's 2013 Law of Business in One Day. This law allows the facilitation of establishment and growth of new companies, co-investment with private investors, attraction of private investors, and provides assistance to accelerator programs.

Chile, according to the OECD in 2018, has a stable economy, stable growth and low unemployment levels, partly thanks to its effective macroeconomic management (OECD/United Nations 2018), with a progressive, albeit slow, reduction of income inequality. Entrepreneurship-wise, it also leads the region with a TEA of 25.6, strongly focused in its capitol Santiago, to the point of being dubbed the Chilecon Valley. Many laws and programs, such as the Start-up Chile from 2010, and Law of Business in One Day built in 2013 are part of the force behind its success in becoming an entrepreneurship hub, which has led as a model for other countries, such as Argentina.

Panama is a rapidly developing economy in the Latin America region, with its GDP per capita having increased by twofold in the past decade. It also holds one of the lowest unemployment levels in the region (Espino Cruz et al. 2017) and is the seventh most competitive country in the region, according to the 2018 Global Competitiveness Report. It is currently experiencing entrepreneurship growth, thanks to the creation of its Micro, Small and Medium Sized Business Authority

(AMPYME), which is aimed towards helping promote and develop micro, small, and medium enterprises.

Spain is slowly recovering from its economic recession, which started in 2008 and plummeted its market, yet still visible today with high unemployment levels (Peña et al. 2017). Its GDP has shown some visible, albeit slow, improvement since 2014, according to the latest Eurydice report, as well increase in its education levels (European Commission Eurydice 2018). Entrepreneurship-wise, it ranks among the lowest in the region, with slow and highly bureaucratic processes, which dampen its progression in business development (Peña et al. 2017). Nonetheless, there has been an ongoing interest in developing programs to foster entrepreneurship activity, more so in educational contexts such as Valnalon and VitaminaE, which is an appreciated effort to lower students' low perception of entrepreneurship as a feasible choice (Guerrero et al. 2016).

2.2. Relevance of Entrepreneurship in Educational Context

It is of common acceptance by now of the growing interest in entrepreneurship at a worldwide scale (Fontenele 2010; Parra 2013) because, fundamentally, it is useful for improving the economy and societal development (Audretsch and Thurik 2001; Reynolds et al. 2005; Storey 1999; White and Reynolds 1996). Entrepreneurship's usefulness stems from its capacity of innovation, competive nature, and the inherent tendency of entrepreneurs to look into solving problems in order to exploit business opportunities (Hernández-Sánchez et al. 2019). These, and other entrepreneurial traits are thought to be plastic, rather than static (Kuratko 2005); therefore, entrepreneurship education has surfaced as an attempt to train people into acquiring a mindset and competence for business.

Because of this, a country's development and progress in education, research and innovation is also considered a contributing factor to its socioeconomic development (Bonaccorsi and Daraio 2007; Rodríguez Vargas 2005). Governments and organizations involved in education have taken the initiative to create strategies and programs that contribute significantly to improve its development. Proof of this is higher education, as one of the growing missions in many universities is to become a direct contribution to society in promoting innovation, creating employment opportunities and social development (Wong et al. 2005). This, together with global competition, a scientific-technical revolution and progressive interest in welfare economics, educational centers in countries with competitive economies where the third mission is being increasingly adopted in the field (Campos 2007; Commission of the European Communities 2006; Gulbrandsen and Slipersaeter 2007; Palomares-Montero et al. 2008) make entrepreneurship education one of the central axes that can actively contribute to the acceleration of the economy. Recent strides to look upon the benefits of entrepreneurship embedded in education show that this actually relates to TEA values (Hernández-Sánchez et al. 2019). Universities that employ entrepreneurship programs or links with outside sources lead to knowledge commercialization and spillover (Acs et al. 1994; Caiazza et al. 2014). There is also a link between entrepreneurial communities and universities (Acosta et al. 2011; Bonaccorsi et al. 2013; Giunta et al. 2016), which shows the potential of these to contribute in local development.

2.3. Entrepreneurship Through the Lens of Intention

According to Krueger and Carsrud (1993), entrepreneurial intention is a state of mind which indicates commitment to perform the behaviors that carry out business initiative. It has been argued that the best predictor of behavior is intentions (Ajzen 2002), and that this also applies in the entrepreneurship context (Liñán and Chen 2009).

Because of this, intention models are highly studied in entrepreneurship literature (Krueger 2017). Generally, it is studied using Theory of Planned Behavior (Ajzen 1991), or Shapero's model (Shapero and Sokol 1982). These broadly state that intentions not only predict behavior, but that it is planned, and comes a result of social support, feasibility, and the attitude towards the behavior. These models, nonetheless, are open to explore different variables and interactions, as well how applicable they are in different contexts (Krueger 2017).

As such, this study is inspired by these models to gauge the variability in which certain attitudes could relate to the probability of business creation by measuring intention, which we formalize as hypotheses in the next section using the following three variables: Perceived Behavioral Control, Subjective Norm, and Entrepreneurial Motivations.

2.4. Hypotheses Development

Perceived Behavioral Control (PBC)—Some authors have found that people who perceive themselves as entrepreneurially-competent would be more likely to set up business (Arenius and Minniti 2005; Langowitz and Minniti 2007; Minniti and Nardone 2006), and Zhao et al. (2005) found that education positively impacts self-efficacy. We hypothesize that PBC enhances a feeling of capability for business, and increase the likelihood of venture creation through intentions. For the purposes of this study, PBC is defined as "people's expectations regarding the degree to which they are capable of performing a given behavior, the extent to which they have the requisite resources and believe they can overcome whatever obstacles they may encounter" (Ajzen 2002, p. 676). Given our sample represents the student population, we assume this will be significant in all countries, as they represent a skilled and educated population.

Hypothesis 1. *Perceived Behavioral Control has a significant positive effect in Entrepreneurial Intentions for all countries.*

Subjective Norm—External valuation of entrepreneurship among different social circles is one of the common factors in intention-based models (Ajzen 1991; Liñán and Chen 2009; Shapero and Sokol 1982), which refers to the perceived social pressure to carry out a behavior or not (Ajzen 1991). Studies tend to show this variable has some inconsistency in predicting intentions; sometimes significant (Liñán and Chen 2009) sometimes not (Autio et al. 2001; Krueger et al. 2000; Turker and Sonmez Selcuk 2009), and sometimes moderated by certain environmental variables, such as economic stress (Arrighetti et al. 2016). Because of this reason, the subjective norm's effect is questioned, but given we include multiple countries in our study, we intend to observe whether it is consistently significant, and to what extent is relevant in any of the countries under study.

Hypothesis 2. *Subjective norm has a significant, positive, effect in entrepreneurial intentions for all countries studied.*

Entrepreneurial Motivations—People are motive-driven into pursuing activities. Entrepreneurship is no exception for this. Some studies have explored the relationship of these motives and entrepreneurship, and seem to relate to performance (Collins et al. 2004; Manolova et al. 2008), meaning they are somewhat driven by it. In other words, people tend to want the prospects of entrepreneurship. We suspect these also work as pull factors into entrepreneurship, comprising part of the factors that lead to intentions.

Motives for entrepreneurship are somewhat dynamic between different groups (e.g., Raposo et al. 2008), but the data points that people who look for entrepreneurship also look for autonomy (Rauch and Frese 2007), self-satisfaction and security (Shabbir and Di Gregorio 1996); novelty (Kourilsky 1980), profitability, the sake for the challenge (Cromie 1987; Maes et al. 2014) and need for achievement, the latter of which Collins et al. (2004), found is actually related to economic success. Given this, and our interest to see whether these motives are part of what drives entrepreneurial intentions, we propose our third and last hypothesis:

Hypothesis 3. *There is a positive and significant relationship between entrepreneurial motivations and entrepreneurial intentions.*

3. Research Methods

3.1. Sample Selection

Our sample comprises of 800 students from four different countries: Argentina = 200, Chile = 200, Panama = 200, and Spain = 200. Mean age was 24 years, and gender-wise, 335 students were male, while 465 were female. Table 1 details our demographic samples by field, number of universities participated, whether they had previous work experience, and gender by their respective country.

Table 1. Demographics.

	Argentina	Chile	Panama	Spain
Field				
Social Sciences	2	-	3	35
Humanities	2	-	1	6
STEM	64	187	3	13
Education	1	1	-	126
Business	91	3	173	1
Law	-	-	-	1
Health	2	-	-	1
Did not specify	38	9	20	17
Previous Work Experience				
As employee	176	66	79	95
Self-employed	75	15	16	10
Gender				
Male	99	132	54	50
Female	101	68	146	150

3.2. Instrument and Materials

We used four variables related to entrepreneurial intention to test our hypotheses, which use a Likert scoring of five points must be answered from 1—Completely Disagree, to 5—Completely Agree:

Perceived Behavioral Control (PBC) frames the level of agreement in which an individual believes it has the ability to control actions related to venture creation, as well the confidence of its performance over it. We include a mixture of perceived controllability and perceived efficacy in its item structure, as they share high commonality and work as a second-order hierarchy (Ajzen 2002). We used items from Sánchez-García (2010). An item example of controllability is: "I can control the processes of creating a new company.", and an example of self-efficacy is "Starting a business would be easy for me.". Confidence values show adequate results ($\alpha = 0.913$)

Subjective Norm frames the level of agreement in which an individual perceives that entrepreneurial activities are favored or sponsored within different social circles. We used items from Sánchez-García (2010) for this variable. An item example is: "My closest friends value entrepreneurial activity above other activities." Confidence values show adequate results ($\alpha = 0.805$).

Entrepreneurial Motivations frames the level of agreement in which an individual would use entrepreneurial activities to pursue specific personal objectives. We used items from Sánchez-García (2010) for this variable. An example among these items would be to start a business "For a feeling of personal fulfillment". Confidence values show adequate results ($\alpha = 0.801$).

Entrepreneurship Intention frames the level of agreement in which a person is determined to start a business. We adapted items from Sánchez-García (2010) for this variable. An item example is: "I have the firm intention to start a business one day." Confidence values show adequate results ($\alpha = 0.953$).

3.3. Data Gathering

Sampling was realized using dates that student availability was highest, hence, we chose from September to November 2018 as the most adequate timeframe to obtain the sample. This was realized with the collaboration of educational contacts across educational institutions within each country, which prompted their students to take our questionnaire. The scale was administered online through a platform specifically designed for it, and was controlled exclusively by members of the Chair of Entrepreneurs of the University of Salamanca. The database comes exclusively from this source, meaning it was all organized and structured within this platform. In order to assure full completion, submission was only permitted only after all items were answered, meaning participants had a 100% completion rate.

3.4. Data Analysis

To test whether there is any difference in these variables by country, we made an Analysis of Variance (ANOVA). Before proceeding, we tested for homogeneity of variance using Levene's Test. If assumptions of equality of variance were to be violated, we would proceed to use Welch's test, which accounts for this. To truly gauge the differences by country, we did a post-hoc analysis as well. To find out whether these variables have any effect on intention, we also made a regression analysis for each country using the software SPSS 23. For model fit measures, we used R-squared values, as well correlations. Internal consistency for each value was done by calculating its alpha coefficient.

4. Results

Model fit indicators show that the variables are fit to use in our model for regression analyses. The four models showed adequate R-squared values: For Argentina = 0.496, Chile = 0.407, Panama = 0.505, Spain = 0.373, Table 2 shows correlations. We calculated the mean and standard deviation of each of the variables per country, which is illustrated in Table 3.

Table 2. Correlations.

	Intention	SubNorm	PBC	Motivation
Intention	1			
SubNorm	0.500 **	1		
PerCnt	0.694 **	0.483 **	1	
Motivation	0.436 **	0.211 **	0.311 **	1

** Correlation is significant at the 0.01 level (2-tailed).

Table 3. Mean, Standard Deviations and Error by Country.

Variable	Country	Mean	Std. Deviation	Std. Error
Intention	Argentina	3.4400	0.99370	0.07027
	Panama	4.0367	0.71908	0.05085
	Chile	3.7275	0.88652	0.06269
	Spain	2.2733	0.91211	0.06450
PBC	Argentina	3.2910	0.89146	0.06304
	Panama	3.7610	0.77879	0.05507
	Chile	3.2690	0.74148	0.05243
	Spain	2.3210	0.85040	0.06013
SubNorm	Argentina	2.9088	0.74059	0.05237
	Panama	3.7800	0.74709	0.05283
	Chile	3.2600	0.77120	0.05453
	Spain	2.5350	0.77575	0.05485
Motivation	Argentina	4.0275	0.66300	0.04688
	Panama	4.1263	0.70399	0.04978

Chile	4.2725	0.70719	0.05001
Spain	4.0288	0.79579	0.05627

Levene's Test showed significant results for Intention (0.000) and PBC (0.002). Given these two variables violate the equality of variance assumption, we used the Welch statistic, and Games-Howell for Post-Hoc. Table 4 shows ANOVA results, and Table 5 shows mean differences between countries.

Table 4. Robust Tests of Equality of Means.

	F [a]	df1	df2	Sig.
Intention	161.323	3	439.018	0.000
PBC	106.742	3	441.208	0.000
SubNorm	97.235	3	442.144	0.000
Motivation	5.252	3	441.434	0.001

[a] Asymptotically F distributed.

Table 5. Post-Hoc Analysis.

Variable	Country	Contrast	Mean Difference	Sig.
Intention	*Argentina*	Panama	−0.59667 *	0.000
		Chile	−0.28750 *	0.013
		Spain	1.16667 *	0.000
	Panama	Argentina	0.59667 *	0.000
		Chile	0.30917 *	0.001
		Spain	1.76333 *	0.000
	Chile	Argentina	0.28750 *	0.013
		Panama	−0.30917 *	0.001
		Spain	1.45417 *	0.000
	Spain	Argentina	−1.16667 *	0.000
		Panama	−1.76333 *	0.000
		Chile	−1.45417 *	0.000
PBC	*Argentina*	Panama	−0.47000 *	0.000
		Chile	0.02200	0.993
		Spain	0.97000 *	0.000
	Panama	Argentina	0.47000 *	0.000
		Chile	0.49200 *	0.000
		Spain	1.44000 *	0.000
	Chile	Argentina	−0.02200	0.993
		Panama	−0.49200 *	0.000
		Spain	0.94800 *	0.000
	Spain	Argentina	−0.97000 *	0.000
		Panama	−1.44000 *	0.000
		Chile	−0.94800 *	0.000
SubNorm	*Argentina*	Panama	−0.87125 *	0.000
		Chile	−0.35125 *	0.000
		Spain	0.37375 *	0.000
	Panama	Argentina	0.87125 *	0.000
		Chile	0.52000 *	0.000
		Spain	1.24500 *	0.000
	Chile	Argentina	0.35125 *	0.000
		Panama	−0.52000 *	0.000
		Spain	0.72500 *	0.000
	Spain	Argentina	−0.37375 *	0.000
		Panama	−1.24500 *	0.000
		Chile	−0.72500 *	0.000
Motivation	*Argentina*	Panama	−0.09875	0.473

	Chile	−0.24500 *	0.002
	Spain	−0.00125	1.000
Panama	Argentina	0.09875	0.473
	Chile	−0.14625	0.164
	Spain	0.09750	0.565
Chile	Argentina	0.24500 *	0.002
	Panama	0.14625	0.164
	Spain	0.24375 *	0.007
Spain	Argentina	0.00125	1.000
	Panama	−0.09750	0.565
	Chile	−0.24375 *	0.007

* Significant at the 0.05 level.

Regression analyses between the proposed variables yielded significant results for all variables within our models, except for Subjective Norm, which gave non-significant, low beta values for Argentina and Chile. PBC showed to have the highest regression weight in Argentina and Spain, however, Motivation's regression weight was higher for the rest of the countries. Table 6 shows regression weights and significance values for each country.

Table 6. Regression Analysis.

	Model Fit	**PBC**		**Subjective Norm**		**Motivation**	
Country	**Adj. R^2**	β	*p*	β	*p*	β	*p*
Argentina	0.496	0.505	0.000	0.065	0.211	0.321	0.000
Chile	0.407	0.346	0.000	0.059	0.320	0.424	0.000
Panama	0.505	0.246	0.000	0.246	0.000	0.404	0.000
Spain	0.373	0.429	0.000	0.209	0.000	0.229	0.000

B = Standardized estimate; Dependent variable: Entrepreneurial Intention; Significance at the <0.05 value.

5. Conclusions and Future Work

Results show that there is variability in attitudes between countries in almost all variables. The only non-significant differences come between Argentina and Chile in PBC, and in entrepreneurial motivations: Argentina with Panama and Spain; Panama with the rest of the countries, Chile with Panama; and Spain with Argentina and Panama. This means that, at the least, they all share a similar (and high) overview of entrepreneurship as means to obtain personal goals.

Panama's students rank higher than the other three countries regarding their sense of controllability and efficacy of potential entrepreneurial endeavors, have higher intentions, and as well perceive higher social support. This can be contextually reasoned, as there is a boom in promoting business development in the country (GEM 2017), and this could be a reflection of these endeavors. Ironically, these attitudes are not reflected in the general population, since the latest GEM report ranks them in Panama lower than the regional average, suggesting the student population could be having a different reality towards business than the rest. Also, although belonging to the same region as Chile, which ranks higher in most entrepreneurship assessment categories (GEM 2018), students from Panama rank higher as well.

The biggest difference comes from Spain's low intentions in relationship to the rest of the countries studied by more than one point. This was somewhat expected, as Spain has not fully recovered from its economic recession. These could be due to Spain's highly bureaucratic system, medium to low perceptions of entrepreneurship as a feasible career, and difficulty in finding financial resources (Guerrero et al. 2016). This difference does not come in just intentions, but in subjective norm and perceived behavioral control as well by a similar one-point margin.

Regression showed most attitudes have a significant, positive relationship with entrepreneurial intentions, except subjective norm in Argentina and Chile, thus, we reject Hypothesis 2. Subjective norm, as previously mentioned, has shown to be inconsistent in intention-based models (Autio et al.

2001; Krueger et al. 2000; Tiwari et al. 2017). This study also supports this, and shows other's valuation towards entrepreneurship is circumstantially relevant to intentions.

Intention-based studies generally show PBC to predict the strongest (Ajzen 2002), but in Chile and Panama, the highest regression coefficient comes from motivations, suggesting entrepreneurial spirit may currently hold a stronger effect on intentions than perceived capabilities in some countries. In fact, according to the latest GEM report, Panama has a high motivational drive towards business. This study confirms this on the student population. The same goes for Chile, suggesting they are highly spirit-driven.

Lastly, entrepreneurship intentions can also sometimes be regarded as a long term plan. For example, The Global University Entrepreneurial Spirit Students' Survey (GUESS)'s 2016 national reports found that in Panama, only 18% of the sampled student population were considering starting business right after graduation, but their score for entrepreneurship intentions was actually quite high (5.9 on a scale of 7). These contradictory results are actually explained by the fact that their entrepreneurship interests are projected at least five years after graduation. Considering this timeframe, 61.7% expect to be business founders. This almost doubles Argentina's score of 38.2% in a 5 year projection, 8.8% after college, and is also higher than Chile's 52.3% five year projection, 8.2 after graduation. There was no report from Spain available by the time of this article, so we cannot contrast their scores. Nonetheless, we suspect they would be low as well.

Finding similar patterns in our study for in intention scores, we also suspect our sample answered in a similar fashion, where entrepreneurship intentions are not considered in the immediate post-university future, but as a process that expects to be accomplished in at least a five year timeframe. As such, we also expect these intention scores to represent at least the next five years of business activity in these countries, which positions Spain at a concerning (but expected) low progress for business in the future, and the other three countries at an increased and noticeable progress, Panama ranking highest, and with the most potential.

5.1. Contribution to Scientific Literature and Policies

This study uses a cross-national approach to further understand the dynamics between certain entrepreneurship attitudes and the intention to start business. Statistically-wise, most attitudes differ between these countries, but the degree in which they would pursue entrepreneurship for their personal goals is fairly consistent. This suggest entrepreneurship still holds potential to flourish, as entrepreneurship motivations ranked high and, in some of the countries studied, their regressions themselves to intentions were quite high, and in all countries, significant.

5.2. Implications for Future Policies

The results obtained from this study leads to some recommendations for future policies, specifically on the administration side:

1. This calls to take action, primarily at the competence stage, as the main objective should be to promote the feasibility of entrepreneurship. Given our educational context, our main suggestion would be to tap into this existing overview of entrepreneurship as means to potentiate student's interest in business by making programs not only more visible, but also appealing. For example, funding platforms like Crowdfunding, which dampen geographical barriers (Agrawal et al. 2011), would be a good starting point to get students not only to move creatively, but to take control of their projects and explore their business interests at an international scale.
2. This population may have a tendency towards small business, specifically in countries with high unemployment levels and economic stress (Hofstede et al. 2004). We recommend for policies and programs to consider focusing on these type of ventures, especially through public initiatives and funding. This study showed that Panama, which is currently promoting and forming small and medium business accelerators, has shown the highest value of the variables studied. We did not specifically prove their accelerator programs are the reason for these high

values, but should be strongly considered as a hint and as a possible query for future studies, and a possibly confounding variable for their current positive perception and intentions for business.

3. Entrepreneurship should be strengthened at the institutional level with the inclusion of industry-university collaboration, which could potentially lead to spinoff creation. Some authors have found this relates to local regional development (Bonaccorsi et al. 2013), which could be beneficial for the developing countries used in this study, as well Spain, which counts as innovation-driven.
4. Curricula should include mandatory entrepreneurship courses. Israr and Saleem (2018) found a strong relation between entrepreneurship education and intentions, and Hernández-Sánchez et al. 2019 found it relates to TEA values, which means entrepreneurship education has a significant impact in societal development, and could benefit from further increasing intentions, especially in Spain. Results show motivations for business is a common characteristic to these countries, and us believe the exposure to these programs would allow students to hone their required skills and further increase intentions.

5.3. Limitations and Future Directions

This study further expands on entrepreneurial literature by gauging the relationship between attitudes and entrepreneurship, and whether intention models hold fixed interactions, or some are moderated by context. We used some variables that are common in entrepreneurship research for this, but there is a myriad of other possibilities that could impact intentions. To improve on this literature, we believe future research could focus on whether these attitudes stem because of entrepreneurship educational programs, and to what extent the visibility and experience of these inspire other attitudes and cognitions, such as knowledge, passion for business, and identity, as it states how much a person believes it "fits" as an entrepreneur. This can also be further studied by grouping variables, such as gender and study field.

We also recommend to include which type of business students are interested in forming. Like previously mentioned in Section 5.2, small business programs and policies could be part of what is driving these positive attitudes as well. It would be useful to explore whether this is causally related to higher intentions, in order to identify what certain types of business should be promoted the strongest in an educational context.

Subjective norm, given its inconsistent effect, we believe should be accompanied by another variable that measures institutional support, as Arrighetti et al. (2016) found certain environments, such as economic stress, make this variable salient for intentions. It could also help explaining the direction in which it predicts intentions in accordance to how supportive our bureaucratic institutions are in different countries.

Author Contributions: J.C.S.-G.; A.W.; B.H.-S. Conceptualization; Methodology, J.C.S.-G.; A.W., formal analysis, J.C.S.-G.; AW; Project management, J.C.S.-G.; B.H.-S. Validation, J.C.S.-G.; Writing: draft, A.W.; B.H.-S.; A.W. and Writing: revision and editing, A.W.

Funding: This research was funded by the Counseling of Education, Junta de Castilla y Leon, Spanish Research project SA042G18J424.

Acknowledgments: The authors are very grateful for the cooperation received from the universities contacted.

Conflicts of Interest: The authors declare no conflicts of interest.

References

Acosta, Manuel, Daniel Coronado, and Esther Flores. 2011. University spillovers and new business location in high-technology sectors: Spanish evidence. *Small Business Economics* 36: 365–76.

Acs, Zoltan, David Audretsch, and Maryann Feldman. 1994. R&D spillovers and innovative activity. *Managerial and Decision Economics* 15: 131–38.

Agrawal, Ajay, Christisan Catalini, and Avi Goldfarb. 2011. *The Geography of Crowdfunding*. Cambridge: The National Bureau of Economic Research. Available online: https://www.nber.org/papers/w16820.pdf (accessed on 30 April 2019).

Ajzen, Icek. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes* 50: 179–211.

Ajzen, Icek. 2002. Perceived Behavioral Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behavior. *Journal of Applied Social Psychology* 32: 665–83. doi:10.1111/j.1559-1816.2002.tb00236.x

Arenius, Pia, and Maria Minniti. 2005. Perceptual Variables and Nascent Entrepreneurship. *Small Business Economics* 24: 33–247. doi:10.1007/s11187-005-1984-x

Arrighetti, Alessandro, Luca Caricati, Fabio Landini, and Nadia Monacelli. 2016. Entrepreneurial intention in the time of crisis: A field study. *International Journal of Entrepreneurial Behavior & Research* 22: 835–59. doi:10.1108/ijebr-12-2015-0326

Audretsch, David, and Roy Thurik. 2001. What's new about the new economy? Sources of growth in the managed and entrepreneurial economies. *Industrial and Corporate Change* 10: 267–315.

Autio, Erkko, Roberto Keeley, Magnus Klofsten, George Parker, and Michael Hay. 2001. Entrepreneurial intent among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies* 2: 145–60.

Bonaccorsi, Andrea, and Cinzia Daraio. 2007. Universities as strategic knowledge creators: Some preliminary evidence. In *Universities and Strategic Knowledge Creation*. Edited by Andrea Bonaccorsi and Cinzia Daraio. Cheltenham: Edward Elgar Publishing.

Bonaccorsi, Andrea, Massimo Colombo, Massimiliano Guerini, and Cristina Rossi-Lamastra. 2013. University specialization and new firm creation across industries. *Small Business Economics* 41: 837–63.

Caiazza, Rosa, David Audretsch, Tiziana Volpe, and Julie Debra Singer. 2014. Policy and institutions facilitating entrepreneurial spin-offs: USA, Asia and Europe. *Journal of Entrepreneurship and Public Policy* 3: 186–96.

Campos, Eduardo Bueno. 2007. La tercera misión de la universidad. El reto de la transferencia del conocimiento. *Revista madri+d* 41. Available online: http://www.madrimasd.org/revista/revista41/tribuna/tribuna2.asp (accessed on 30 April 2019).

Cohen, Luc. 2018. Argentina's economic crisis explained in five charts. *Reuters*, August 2018. Available online: https://www.reuters.com/article/us-argentina-economy/argentinas-economic-crisis-explained-in-five-charts-idUSKCN1LD1S7 (accessed on 30 April 2019).

Collins, Christopher, Paul Hanges, and Edwin Locke. 2004. The relationship of achievement motivation to entrepreneurial behavior: A meta-analysis. *Human Performance* 17: 95–117.

Commission of the European Communities. 2006. *Communication from the Commission—Delivering on the Modernisation Agenda for Universities: Education, Research and Innovation*. Brussels: Commission of the European Communities.

Cromie, Stanley. 1987. Motivations of aspiring male and female entrepreneurs. *Journal of Occupational Behavior* 8: 251–61.

Cruz, Marta. 2017. Argentina's government is wooing entrepreneurs with a new law. *TechChrunch*, June 21. Available online: https://techcrunch.com/2017/06/21/argentinas-government-is-wooing-entrepreneurs-with-a-new-law/ (accessed on 30 April 2019).

Espino Cruz, José Armando, María de los Ángeles Frende Vega, and Brizeida Hernández-Sánchez. 2017. *Técnicas para el desarrollo de competencias emprendedoras en el sistema educativo*. Panamá City: Fundación para el Desarrollo Integrado Sustentable (FUDIS).

European Commission Eurydice. 2018. *Spain: Political and Economic Situation*. Eurydice Report. Luxembourg: Publications Office of the European Union.

Fontenele, Raimundo Eduardo Silveira. 2010. Empreendedorismo, competitividade e crescimento econômico: Evidências empíricas. *Revista de Administração Contemporânea* 14: 1094–112.

Global Entrepreneurship Monitor Consortium (GEM). 2017. *GEM Global Entrepreneurship Monitor: Panama, 2017*. Available online: http://cdn.gestorsutil.com/CDS_web/1/documentos/docs/0027350001530198119.pdf (accessed on 8 March 2019).

Global Entrepreneurship Monitor Consortium (GEM). 2018. *GEM Global Entrepreneurship Monitor: Global Reports, 2017–2018*. Available online: http://www.gemconsortium.org/report (accessed on 8 March 2019).

Giunta, Anna, Filippo Maria Pericoli, and Eleonora Pierucci. 2016. University-industry collaboration in the biopharmaceuticals: The Italian case. *Journal of Technology Transfer* 41: 818–40.

Guerrero, Maribel, David Urbano, Antonio Ramos, José Ruiz-Navarro, Isabel Neira, and Ana Fernández-Laviada. 2016. *Observatorio de Emprendimiento Universitario en España. Edición 2015–2016*. Madrid: Crue Universidades Españolas-RedEmprendia-CISE.

Gulbrandsen, Magnus, and Stig Slipersaeter. 2007. The third mission and the entrepreneurial university model. In *Universities and Strategic Knowledge Creation*. Edited by Andrea Bonaccorsi and Cinzia Daraio. Cheltenham: Edward Elgar Publishing.

Hernández-Sánchez, Brizeida Raquel, José Carlos Sánchez-García, and Alexander Ward Mayens. 2019. Impact of Entrepreneurial Education Programs on Total Entrepreneurial Activity: The Case of Spain. *Administrative Sciences* 9: 25. doi:10.3390/admsci9010025

Hofstede, Geert, Niels Noorderhaven, Roy Thurik, Lorraine Uhlaner, Alexander Wennekers, and Ralph Wildeman. 2004. Culture's role in entrepreneurship: Self-employment out of dissatisfaction. In *Innovation, Entrepreneurship and Culture*. Edited by Terrence Brown and Jan Ulijn. Cheltenham: Edward Elgar, pp. 162–203.

Israr, Muhammad Israr, and Mazhar Saleem. 2018. Entrepreneurial intentions among university students in Italy. *Journal of Global Entrepreneurship Research* 20. doi:0.1186/s40497-018-0107-5.

Khadeeja, Abdul, Taha Salam, Nurshahrizleen Ramlan Sayang, and Noor Idris Mohd. 2017. The Factors Affecting Entrepreneurial Intentions of University Students in Malaysia. *International Journal of Business and Technopreneurship* 7: 189–202.

Kourilsky, Marylin. 1980. Predictors of entrepreneurship in a simulated economy. *Journal of Creative Behavior* 14: 175–98.

Krueger, Norris. 2017. Entrepreneurial intentions are dead: Long live entrepreneurial intentions. In *Revisiting the Entrepreneurial Mind*. Cham: Springer, pp. 13–34.

Krueger, Norris, and Alan Carsrud. 1993. Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development* 5: 315–30.

Krueger, Norris, Michael Reilly, and Alan Carsrud. 2000. Competing models of entrepreneurial intentions. *Journal of Business Venturing* 15: 411–32.

Kuratko, Donald. 2005. The Emergence of Entrepreneurship Education: Development, Trends, and Challenges. *Entrepreneurship Theory and Practice* 29: 577–98. doi:10.1111/j.1540-6520.2005.00099.x.

Langowitz, Nan, and Maria Minniti. 2007. The entrepreneurial propensity of women. *Entrepreneurship Theory and Practice* 31: 341–64.

Liñán, Francisco, and Yi-Wen Chen. 2009. Development and Cross-Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions. *Entrepreneurship Theory and Practice* 33: 593–617. doi:10.1111/j.1540-6520.2009.00318.x

Maes, Johan, Hannes Leroy, and Luc Sels. 2014. Gender differences in entrepreneurial intentions: A TPB multi-group analysis at factor and indicator level. *European Management Journal* 32: 784–94. doi:10.1016/j.emj.2014.01.001

Manolova, Tatiana, Candida Brush, and Linda Edelman. 2008. What do women entrepreneurs want? *Strategic Change* 17: 69–72.

Minniti, Maria, and Carlo Nardone. 2006. Being in someone else's shoes: Gender and nascent entrepreneurship. *Small Business Economics* 28: 223–39.

OECD/United Nations. 2018. What's next on Chile's growth and development agenda? In *Production Transformation Policy Review of Chile: Reaping the Benefits of New Frontiers*. Paris: OECD Publishing.

Palomares-Montero, Daivina, Adela García-Aracil, and Elena Castro-Martínez. 2008. Assessment of Higher Education Institutions: A Bibliographic Review of Indicators' Systems. *Revista española de Documentación Científica* 31: 205–29.

Parra, Soledad. 2013. Exploring the incorporation of values for sustainable entrepreneurship teaching/learning. *Journal of Technology Management & Innovation* 8: 11–20.

Peña, Iñaki, Maribel Guerrero, José González-Pernía, and Javier Montero. 2017. *Global Entrepreneurship Monitor. Informe GEM España 2017–2018*. Santander: Ed. Universidad de Cantabria.

Pradilla, Maria. 2012. Entrepreneurship in Argentina. In *The Future of Entrepreneurship in Latin America. International Political Economy Series*. Edited by Esteban Brenes and Jerry Haar. London: Palgrave Macmillan. doi:10.1057/9781137003324_2.

Raposo, Maria, Arminda do Paço, and João Ferreira. 2008. Entrepreneur's profile: A taxonomy of attributes and motivations of university students. *Journal of Small Business and Enterprise Development* 15: 405–18. doi:10.1108/14626000810871763.

Rauch, Andreas, and Michael Frese. 2007. Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of Work and Organizational Psychology* 16: 353–85. doi:10.1080/13594320701595438.

Reynolds, Paul, Niels Bosma, Erkko Autio, Steve Hunt, Natalie De Bono, Isabel Servais, and Nancy Chin. 2005. Global entrepreneurship monitor: Data collection design and implementation 1998–2003. *Small Business Economics* 24: 205–31.

Rodríguez Vargas, José de Jesús. 2005. La Nueva Fase de Desarrollo Económico y Social del Capitalismo Mundial. Ph.D. thesis. Available online: http://www.eumed.net/tesis/jjrv/ (accessed on 30 April 2019).

Sánchez-García, José Carlos. 2010. Evaluation of Entrepreneurial Personality: Factorial validity of Entrepreneurial Orientation Questionnaire (COE). *Revista Latinoamericana de Psicología* 42: 41–52.

Sánchez-García, José Carlos, Alexander Ward Mayens, Gioconda Vargas-Morúa, Jenny Linette Florez Daza, and Brizeida Hernández Sánchez. 2018. How does Cultural Norms Influence Entrepreneurial Intention? A Cross Cultural Study. *Journal of Business* 10: 52–69. doi:10.21678/jb.2018.877.

Shabbir, Amama, and Silvana Di Gregorio. 1996. An examination of the relationship between women's personal goals and structural factors. *Journal of Business Venturing* 11: 507–30.

Shapero, Albert, and Lisa Sokol. 1982. Social dimensions of entrepreneurship. In *The Encyclopedia of Entrepreneurship*. Edited by Calvin Kent, Donald Sexton and Karl Vesper. Englewood Cliffs: Prentice Hall, pp. 72–90.

Storey, Andy. 1999. Economics and ethnic conflict: Structural adjustment in Rwanda. *Development Policy Review* 17: 43–63.

Tiwari, Preeti, Anil Bhat, and Jyoti Tikoria. 2017. An empirical analysis of the factors affecting social entrepreneurial intentions. *Journal of Global Entrepreneurship Research* 7: 1–25.

Turker, Duygu, and Senem Sonmez Selcuk. 2009. Which factors affect entrepreneurial intention of university students? *Journal of European Industrial Training* 33: 142–59. doi:10.1108/03090590910939049.

White, Sammis, and Paul Reynolds. 1996. Government programs and high growth new firms. *Frontiers of Entrepreneurship Research* 1996: 621–35.

Wong, Poh Kam, Yuen Pin Ho, and Erkko Autio. 2005. Entrepreneurship, Innovation and Economic Growth: Evidence from GEM data. *Small Business Economics* 24: 335–50.

World Bank. 2005. *Monitoring Socio-Economic Conditions in Argentina, Chile, Paraguay and Uruguay: Monitoring Socio-Economic Conditions in Argentina (English)*. Buenos Aires: Centro de Estudios Distributivos, Laborales y Sociales (CEDLAS)/UNLP.

Zhao, Hao, Scott Seibert, and Gerald Hills. 2005. The mediating role of self-efficacy in the development of entrepreneurial intention. *Journal of Applied Psychology* 90: 1265–72.