

The Sharing Economy and its Influence on Entrepreneurship Intention

ABSTRACT

The main objective of this study is to analyze the spillovers effects of platforms-based sharing economy firms' globalization on the entrepreneurial intention (EI), and the differential effects over rich and poor countries by using the Global Entrepreneurship Monitor (GEM) dataset. According to our knowledge, this study is one of the few that attempt to analyze this relation in a quantitative way and show causal numeric results. Based on the Theory of Planned Behavior (TBP) model, this study tested the hypothesis that sharing economy firms' adoption spur local entrepreneurial intentions. The results showed that in rich countries, the more the knowledge of the sharing economy business model, the more is the entrepreneurial intention; in contrast, in poor countries the entrepreneurial intentions decrease but non significantly. This should lead the policy makers to make programs that improve the entrepreneurship ecosystem and support in poor countries and try to adapt internet based business model which lead to innovation and consequently economic growth.

Keywords: Entrepreneurial intention, subjective norms, sharing economy.

INTRODUCTION

The sharing economy model has proven to be a sustainable business model, more than just a temporary trend (Parente et al., 2017). To date there is a high number of companies doing business based on the concept of “Sharing” underutilized assets. There is a group of internet platforms expanding at a great speed around the world in many different sectors (Belk, 2014). Undoubtedly, there are many reasons why this type of business has become very popular, for example, the average use of cars in North America and Western Europe is only 8% of the time (D. Sacks, 2011). This is a clear example of idle capacity that can be shared. The internet platforms can intermediate the process and make the communication between users and providers more fluent. Therefore, the effect of the Information Communication Technology (ITCs) plays a significant role not only regarding the interaction between users and providers, but also in the expansion and the success of the sharing economy firms (Alcácer et al., 2016; Brouthers et al., 2016).

The term “sharing economy” is frequently used to describe organizations that use internet platforms to connect users and providers via consumer to consumer (C2C) (e.g., Uber, Airbnb) or business to consumer (B2C) platforms, other terms such as “Collaborative Consumption” (Möhlmann, 2015; Botsman and Rogers, 2010) or “gig economy” have also been used. The term “sharing” has been widely criticized because most of the firms and providers in this sharing economy model charge for their services, for this reason, the term “sharing” should be changed to “access” (Eckhardt and Bardhi, 2015).

Frenken et al. (2015) define the sharing economy as: consumers granting each other temporary access to underutilized assets (“idle capacity”), possibly for money. Frenken and Schor (2017) made the distinction between “sharing economy”, “On-Demand Economy”, “Second hand Economy” and “Product-Service Economy” based on the premise that the term “sharing economy” has to be used only for those cases when there exists an excess capacity of a consumer good. In the case of Airbnb, there actually exists an idle capacity that can be shared, but if a person buys a new house only for rent, this will not be part of the sharing economy because the excess of capacity was created for profitable ends. Similarly, when a person orders a taxi via Uber or Didi, the owner was not driving because he likes to drive, the owner creates the excess capacity at the moment he decided to go out in his car and start doing Uber in that day. Specifically, this is the principal difference between order a taxi via these platforms and

sharing a ride through BlaBlaCar for example or any other hitchhiking or carpooling platform (Meelen and Frenken, 2015).

In this study, due to the lack of a consensus about the term “sharing economy”, we explain our results based on the definition added to the Oxford English Dictionary in 2015 that states that sharing economy is “an economic system in which assets or service are shared between private individuals, either free or for a fee, typically by means of the Internet”. We have selected four of the most popular internet-based companies that implies social interactions involving access to underutilized assets (e.g., Uber, Airbnb, Lift and OlaCabs data) to analyze the influence that these business models’ spillovers have had on the entrepreneurial intention (EI).

We explored particular, whether sharing economy firms would contagious entrepreneurial attitude in different countries around the world, which ends up becoming a motivator to start an entrepreneurial activity and consequently raising the level of entrepreneurial intention, which is the principal predictor for entrepreneurial behavior. Sharing economy firms are drivers of global knowledge networks (Cantwell and Mudambi, 2005). In addition, sharing economy has demonstrated to be able to spur local entities and enterprises to an adoption of internet based business approach (Parente et al., 2018).

This paper is structured as follow, first we present a literature review focused on the field of sharing economy, highlighting the implications of the boom of sharing economy firms and its implications in the global perspective about entrepreneurship. Second, we present the theoretical model used to test the effect of the sharing economy globalization on entrepreneurial intention, third we present the data, measures, and methodology employed to test the hypothesis. The paper concludes by discussing the implications of the obtained results and doing some recommendations both for future research and for policy makers in the countries.

Specifically, this paper contributes to the literature by extending our understanding on how organizations should deal with the movement of sharing economy firms and how to be benefited from them and not the opposite?

THEORETICAL BACKGROUND

Sharing economy Globalization

Many studies have investigated the concept of business platform under operation, management and economic perspective (Armstrong, 2006; Eisenmann et al., 2011; Gawer,

2011). Those studies show the interaction between products, services, and technologies that has been created independently by different firms but are around a marketplace or device. The specific marketplaces have been created to receive and process transactions between users and providers (Armstrong, 2006; Cennamo and Santalo, 2013). In the case of the sharing economy firms, a platform is needed to connect providers and users in a sort of a virtual marketplace where they can trade many things follow certain rules.

Sharing economy has the advantage that the internet platforms have reduced the transaction costs of tangible assets management. In other words, products can be commercialized to another's countries easily. The principal characteristic of the sharing economy firms is that they use local assets. They can internationalize easily and rapidly because they rely on local providers for business adaptation focusing on efficient operational integration (Parente et al., 2018).

The difference between sharing economy and traditional B2C models is that the sharing economy firms do not have to own the assets, they only have to connect users with providers and charge a fee for that. Thus, sharing economy firms can take a multisided platform form (Eisenmann et al., 2011; Iansiti and Levien, 2004) and this relies most on ITCs. This kind of business are really helpful for people in general, because it can substitute for example the process of go out to take a taxi or call many different providers to rent an apartment. With internet based business, people have all the information they need for taking a good choice, handily.

Sharing economy firms have expanded internationally no caring about cultural or economic discrepancies. Parente et al. (2018) use the Own Location Internalization (OLI) Theory of international business (IB) to define the principal differences between traditional business models and sharing economy models. Sharing economy firms' location are mostly based on the market potential, the location advantage is based on the ecosystem that some country could have. Own advantage is based on knowledge, technology and ITCs that can be replicated anywhere, different from traditional business model that have to own assets and consequently is very difficult to replicate. Internalized advantage is technology based, due to they have a lite-assets structure because they use local providers' assets to satisfy consumers' needs. Others facilities for the rapid internationalization of sharing economy firms are that they do not have to move production and internalization is limited to platforms operations. Local adaption in any country may not lead to organizational change.

One key factor of the platforms is the reduced cost to connect providers with users. Definitely, through platforms, it is possible to satisfy customer's needs (Eisenman et al., 2009; Gawer, 2011) at a low cost. Platforms also have many features that enhance the communication between provider, users, and external institutions like 911. The system of ratings elevates the level of trustworthy in users and contribute to the adoption and willingness of the people to use these platforms. Traditional firms make efforts to develop products to a specific target market, in contrast, sharing economy firms concentrate their efforts to create an efficiently platform that serves as marketplace to connect providers and users, conveniently according to their requirements. The sharing economy firms, grow as more as users and providers adopt their platform (Altman et al., 2015; Eisenman et al., 2006; Gawer, 2011)

The nature of low level of assets own and the instant global adoption of the sharing economy firms is a challenge for local B2C models. Due to this, in order to compete, local firms have adopted an internet based business model (Parente et al., 2018). Price Waterhouse Coopers estimates the global revenues from sharing economy in 5 sectors (e.g. travel, car sharing, finance, staffing, music, and video streaming) which will increase from 15 billion in 2015 to 335 billion by 2025.

It is not a surprise to see a sort of explosion in sharing economy startups, getting the interest of the academia, investors, entrepreneurs, and spurring the imagination of these people to get in entrepreneurial activities based on the sharing economy models (Muñoz and Cohen, 2017). In many emergent markets like Indonesia, Rio de Janeiro, and Nigeria, sharing economy firms have helped to create projects that generate thousands of jobs and fomented many new ventures (Parente et al., 2018)

Since sharing economy model is not difficult to imitate, the advantage of first mover is of vital importance, because as we discussed above, this kind of business could spur the local investment in internet based entrepreneurship. In the case of Uber, investing in many countries around the world is of vital importance to the creation of "virtual cycle" in which networks effects are expanded (Radhakrishnan, 2015).

An increasing of the sharing economy firms' activity in any country leads to the improvement of the local and international competition (Parente et al., 2018). Additionally, this could result in the growth of the entrepreneurial activity based on the internet business, being beneficial to any country focused on rise its level of innovation. There is a recent movement focusing on the transformation of traditional business into internet based business

models and data driving marketplace which has been “the most prominent business model among startups” (Parente et al., 2018). Entrepreneurs in different countries have noted that this business model can be applied to other business such as real state, booking, and service in general, etc. Local entrepreneurs have the advantage of knowing the national ecosystem and rapidly imitate a successful platform, adding customized features to the local market and satisfying in a better way the customer’s needs. Institutional theory can help to understand the combination of local regulatory, normative, and cognitive aspects necessary to the adoption and generation of sharing economy business model (Geels, 2004; Kostova, 1997; Scott, 2013).

The reasons discussed above make us strongly believe that the globalization of sharing economy firms could lead to changes in the entrepreneurial intention of local entrepreneurs from the countries where these firms have been established. Moreover, entrepreneurs in local markets can easily copy the model or imagine the application of the model to any other business. In other words, this will lead to increase the level of entrepreneurial intention in these countries and then increase the level of entrepreneurial behavior.

Conceptual framework

To study the entrepreneurial intention, maybe there no exist a better and arguably model than the Theory of Planed Behavior (TPB), hundreds of studies have applied the TPB to study the human behavior based on three antecedents (Attitude toward behavior, Subjective norms, and Perceived Behavior control). We took these three antecedents and added our variable of interest (sharing economy) and some control variables to the model. Specifically, we tested how EI response to these variables.

DATA AND METHODOLOGY

Data and sources

The purpose of this study is to examine how the rapidly growth of the sharing economy firms’ popularity around the world influences the perception that people have about entrepreneurship. Specifically, how this phenomenon affects the entrepreneurial intentions in people from the different regions in the world.

We attempt to analyze if the increase of the popularity of the sharing economy firms would increase the entrepreneurial intention by using the Theory of Planed Behavior specification (Ajzen, 1991). Our data source is the Global Entrepreneurship Monitor (GEM). The GEM project includes the Adult Population Survey (APS) and the National Experts Survey (NES). On the one hand, the APS covers a representative sample of the population in each participant

country (Reinolds et. al, 2005). On the other hand, the NES includes a representative sample of entrepreneurship experts in each participant country. We use data from the 8-years period 2010-2017 to evaluate the evolution of the entrepreneurial intentions in 52 countries. The GEM has evolved over time, covering many countries. This means that the survey has not been necessary performed in each country continuously. Therefore, 52 countries have been chosen at holding 5 observations of our dependent variable.

We use country level control variables from the World Developing Indicators of the World Bank dataset. Data for the popularity of the sharing economy firms was collected from the google trends index, in which the numbers correspond to the interest of searches related to the maximum value for a determined region and period of time. An elevated value of the index indicates a higher proportion of searches about a determined subject, the count is not in absolute terms.

Measures

This section describes the measurement of the constructs in our research model. We use variables from the APS and NES to estimate our predictors as latent variables (indicators) based on the Principal Component Analysis. Estimations of each indicator are based on the formula used by GEM to calculate the dimensions on the NES. The general formula to calculate each latent variable is:

$$I_{nx1}^t = \frac{(X_{nxk}^t)(w_{kx1}^t)}{(1_{kx1})'(w_{kx1}^t)} \quad (1)$$

Where I_{nx1}^t is the vector that contains the observations of the new indicator in year t, w_{kx1}^t represent the “weights” vector of the first component for each original variable in the new indicator in year t, taken from the Principal component analysis. X_{nxk}^t represents the set of original variables in year t used to create the indicator and 1_{kx1} is the vector which its elements are the number 1. A detailed description of the antecedents used to estimate the latent variables of the model, are shown in appendix 1.

Country-level dependent variable

Entrepreneurial intention

Consistent with the recommendations on how to measure the Entrepreneurial intention (Ajzen, 1991), we use an APS country level variable which represents the likelihood that an individual will start a new business in the next 3 years. This indicator complies with the recommendations based on the following reasons. First, intention measure corresponds to the focal behavior (APS

use the expression, **expect** to start a new business). Second, measure includes a specific time for the action of start a new business (3 years). Due to these arguments, we can say that the link between intention and behavior is clear and salient to individuals (Sheppard et al., 1988).

To examine whether the time span (3 years) is problematic, we follow Zapkau et al. (2014) whom calculated the correlations between their Entrepreneurial intention measure (which includes a time span of 2 years) and the similar measure from Kolvereid (1996), which does not include such a finite time span. The correlation between both measures was significant. In addition, they examine the correlation between their measure and the measure proposed by Liñán and Chen (2009). One more time, the correlation coefficient indicated a high positive correlation between both measures of entrepreneurial intention. Thus, we can use the GEM's Entrepreneurial intention measure in this study.

Country-level independent variables.

Attitude toward behavior

Attitude toward behavior refers to the level at which a person evaluates favorable or unfavorable to engaging in an entrepreneurial activity. To measure the Attitude toward behavior, we use three variables from the APS.

First, the national aggregate that indicate what percent of all respondents know someone personally who started a business in the past 2 years. We use this measure because people who live in an environment full of entrepreneurs, would have a better attitude and willingness towards entrepreneurship. Second, we use the conceptualization proposed by Autio et al. (2001) and Gird and Bargraim (2008) whom measured Attitude toward behavior assessing the attractiveness of entrepreneurship as a career choice. Third, we followed Liñán and Chen (2009) whom develop a measure of Attitude toward behavior which includes items about the opportunity of starting a business and its advantage or disadvantage.

Subjective norms.

Subjective norms refer to the social perception about entrepreneurship and the social pressure to perform an entrepreneurial activity. Kolvereid (1996) uses three items to analyze the influence of three reference groups (People who are important to the respondents, friends, and family) had in the decision to pursue an entrepreneurial activity. In 2009, Liñán and Chen asked to people if they believed that family, friends, and colleagues would approve the decision to create a firm.

We decided to use the measures provided by the APS, related to the conceptualizations given by Kolvereid (1996) and Liñán and Chen (2009), which are resume in appendix 1, both

measures are related to the social status and perception that not only family, colleagues and friends have, even also are related with the perception from the society about entrepreneurs.

Perceived behavioral control.

Perceived behavioral control refers to the sense of self-efficacy. Liñán and Chen (2009) used items like “I am prepared to start a viable firm”, “I know the necessary practical details to start a firm” and “I know how to develop an entrepreneurial project”. As we can see, these items correspond to the people’s knowledge and capabilities to start a business. GEM APS provide us with a very useful indicator which can be used as a proxy of perceived behavioral control named SUSKILyy, it represents the percentage of all respondents (18-64) who say they have the knowledge, skill, and experience required to start a new business.

Country with high values of this item could indicate that there is a lot of people whom feel that they have the abilities to start a new firm and therefore they will perceive more behavioral control. On the other hand, countries with a low level of this indicator could mean that people in these countries do not think they have the knowledge, skill, and experience to start a new firm and therefore they will perceive less behavioral control.

Sharing economy

The premise of this study is that the globalization of the sharing economy firms would encourage people around the world to start new entrepreneurial intents. As we can see, the growing of these companies has been accelerated, and this could be explained because this model could be easily replicated in different countries around the world. We use the trends index from google, about 4 of the most popular sharing economy firms around the world (description of these variables are shown in the appendix 1). These companies are Uber, Airbnb, Olacabs and Lyft, applying the same methodology used to the other latent variables, we used the 4 variables to estimate the latent variable named sharing economy.

Country-level control variables.

We also tested the influence of additional formal institutions, we used indices from the GEM National Experts Survey. First, we include the Effect of the Education by constructed a latent variable based on the NES items which are related to the education (see appendix 1). Second, we include the effect of the government support by gauging a set of variables taken from the NES (see appendix 1). Third, we used 4 items from the NES to estimate one latent variable which can explain the support of the context of the country on the entrepreneurial activities (see appendix 1).

We also use the item “R&D level of transference” taken from the NES and 3 country level variables taken from the dataset of the World Bank organization. These variables are: % of unemployment, % of growth of the GDP Per cap power parity purchase adjusted (international \$) and Cost of business start-up procedures (% of GNI per capita). Table 2 resume the set of variables used in our study. Table 1 resume the Eigen values for the different latent variables, in that table we can observe the Eigen values greater than 1.

Table 1. PCA Eigenvalues

Year	Latent variable	Eigen Values			
2010	Attitude Toward Behavior	1.957734	0.708998	0.333267	0.315991
	Sharing economy	1.377762	0.622238		
	Education	1.450826	0.549174		
	Subjective norms	1.444302	0.555698		
	Government support	2.438014	0.312282	0.249704	
	Context support	2.314988	0.752615	0.616406	0.315991
2011	Attitude Toward Behavior	1.626047	0.892496	0.481457	0.330316
	Sharing economy	1.196761	0.803239		
	Education	1.437037	0.562963		
	Subjective norms	1.250172	0.749828		
	Government support	2.353743	0.333171	0.313085	
	Context support	2.383791	0.894445	0.391448	0.330316
2012	Attitude Toward Behavior	1.370974	1.122657	0.506369	0.479964
	Sharing economy	1.164863	0.835137		
	Education	1.656969	0.343031		
	Subjective norms	1.434834	0.565166		
	Government support	2.321291	0.394437	0.284271	
	Context support	2.287128	0.68278	0.550128	0.479964
2013	Attitude Toward Behavior	1.529727	0.87224	0.598033	0.360128
	Sharing economy	1.271332	1.080513	0.648155	
	Education	1.529298	0.470702		
	Subjective norms	1.253712	0.746288		
	Government support	2.432412	0.336483	0.231105	
	Context support	2.063875	0.96776	0.608237	0.360128
2014	Attitude toward behavior	1.524213	0.794908	0.680879	0.324171
	Sharing economy	2.417689	0.623312	0.564086	0.394913
	Education	1.432316	0.567684		
	Subjective norms	1.321692	0.678308		
	Government Support	2.305458	0.514701	0.179841	
	Context Support	2.37597	0.715495	0.584365	0.324171
2015	Attitude toward behavior	1.530328	0.861899	0.607773	0.313153
	Sharing economy	1.894153	1.02733	0.672986	0.405531
	Education	1.560667	0.439333		

	Subjective norms	1.289286	0.710714		
	Government Support	2.363738	0.365562	0.2707	
	Context Support	2.287195	0.820431	0.579221	0.313153
2016	Attitude toward behavior	1.421917	0.935502	0.642582	0.486713
	Sharing economy	1.605181	1.030776	0.915782	0.448261
	Education	1.498059	0.501941		
	Subjective norms	1.356074	0.643926		
	Government Support	2.243463	0.442732	0.313805	
	Context Support	1.982032	0.89092	0.640334	0.486713
2017	Attitude toward behavior	1.581204	0.767905	0.650891	0.35031
	Sharing economy	1.644894	0.91999	0.813176	0.62194
	Education	1.567166	0.432834		
	Subjective norms	1.187105	0.812895		
	Government Support	2.478752	0.386522	0.134727	
	Context Support	2.430735	0.664244	0.554711	0.35031

Model Specification

As we mentioned previously, we used a panel data approach, thus we have the advantage to control for individual heterogeneity, because each country has specific characteristics (unobservable effects).

The model can be written as

$$y_{it} = \beta_0 + \mathbf{X}'_{it}\boldsymbol{\beta} + u_{it} \quad (2)$$

$$u_{it} = \mu_i + \lambda_t + v_{it} \quad (3)$$

Where y_{it} denotes the dependent variable, β_0 is the constant of the model, $\boldsymbol{\beta}$ is dimension (kx1) and contains the coefficients to be estimated, $\mathbf{X}'_{it}$ is the i th observation on K explanatory variables. u_{it} is the error term of the model, where μ_i denotes the unobservable individual effect, λ_t denotes the unobservable time effect and v_{it} is the remainder stochastic disturbance term. These unobservable effects could be assumed random or fixed.

Table 2. Description of the variables

Variables		Source
Dependent Variable	Entrepreneurship intent	GEM 2010-2017
Independent Variables	Attitude toward behavior	GEM 2010-2017
	Subjective norms	GEM 2010-2017
	Perceived behavior control	GEM 2010-2017
	Sharing economy	GEM 2010-2017
Controls Variables	Education	GEM 2010-2017
	Government Support	GEM 2010-2017
	Context Support	GEM 2010-2017

R&D Transference	GEM 2010-2017
Unemployment	WDI 2010-2017
Cost of Business procedures	WDI 2010-2017
% Growth GDP	WDI 2010-2017

The nature of the data tells us which model is better between fixed or random effects models Baltagui (2005). A Hausman specification test was used to decide which model fits better to the data, this test was applied to the pooled data and to the data separated by levels of income. Table 3 shows the results of the specification model.

Table 3. Specification model

	Hausman Specification Test		Breusch-Pagan Specification Test	
Sample	p-value	Specification	p-value	Specification
Pooled.	0.0001	Fixed Effects		
Mid-Low income	0.1111	Random Effects	0.0000	Random Effects
high income	0.1155	Random Effects	0.0000	Random Effects

We have reasons to believe that variation over time is minimal for every country, we will show this later in the descriptive analysis, and this is another reason to use random effects. We have also reasons to believe that countries in the sample have different behaviors based on their own ecosystem of entrepreneurship. When differences across entities have some influence on dependent variable, we should use random effects (Torres-Reyna, 2007).

RESULTS

In order to investigate the trend of the Entrepreneurial Intention across countries and across time, we first made a graphic across countries (figure 1) and across years (figure 2), we could see that the mean of entrepreneurial intention within countries does not surpass the 60% and there is not a clear image of whether exist a group of countries which have a higher level of entrepreneurial intention.

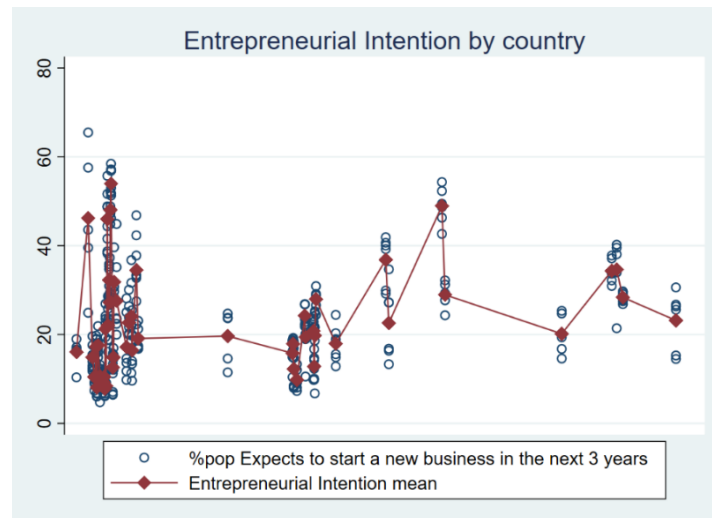


Fig. 1. Fixed Effects heterogeneity across countries

Figure 2 shows the entrepreneurial intention evolution for the period of time of the study, as we can see, the between countries mean for every single year seems to be unchanged and around 20%.

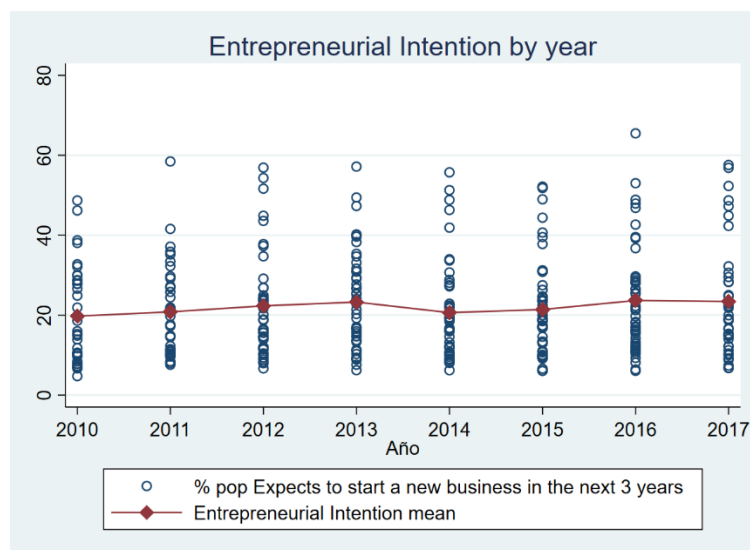


Fig. 2. Fixed Effects heterogeneity across years

Figure 3 shows the entrepreneurial intention evolution separated by income level, here we can see more variability across the time for our dependent variable.

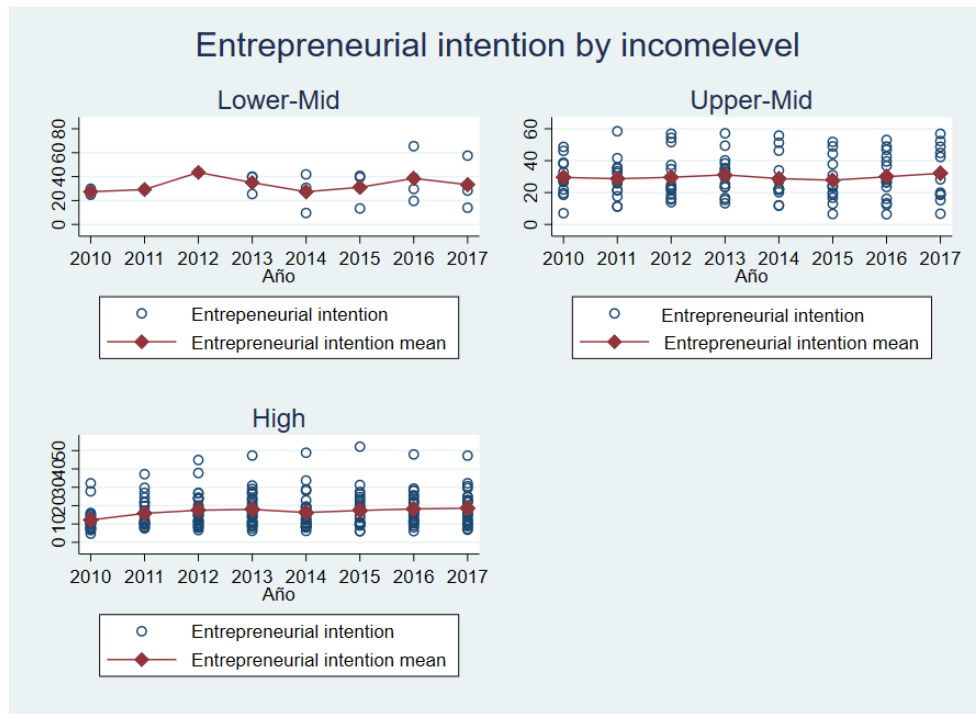


Fig. 3. Entrepreneurial intention Evolution by Income level

Table 4 shows the estimated results, adopting the specification discussed in table 3. Model pooled include countries from low to high income level in the regression, Mid-Low income model includes countries with income level of Lower Mid and Upper Mid, and High income model includes countries with high income level.

Table 4. Regression results

Variables	Pooled Entrepreneurial intention	Mid-Low income Entrepreneurial intention	High income Entrepreneurial intention
Predictors			
Attitude Toward Behavior	0.1286	0.2089	0.0957
Subjective Norms	0.29091**	0.2409	0.2219**
Perceived behavioral control	0.1581	0.1671	0.3258***
Sharing economy	0.0527	-0.0734	0.0807**
Controls			
Education	0.1170	6.8551	-1.4132
Government Support	-1.8551	-4.1311	0.1300
Context Support	-2.2466	-3.6578	-2.0778
R&D Transference	-0.4244	-6.6729	0.0960
unemployment	0.3764*	-0.0822	0.1181
Cost of Business Procedures	-0.1149	-0.0499	0.0646
% Growth GDP	0.1140	0.3122	0.0856
Constant	-2.5349	14.0791	-9.2919
Observations	279	91	188
rho	0.8359	0.5731	0.8256

Regarding to the pooled model, we observe that entrepreneurial intention increases in countries with high level of attitude toward behavior, subjective norms, and perceived behavior control. The more knowledge that customer holds related to the sharing economy business model also increase the level of entrepreneurial intention, however the relationships are not significant. The no significance of some variables could be explained by the different income level among countries and due to other unobserved characteristics that opaque the influence of these variables on the EI. In the next two models, we can see that for countries with Mid-Low income level, no variable is significant and even, the more knowledge of the sharing economy business model decreases the entrepreneurial intention.

We have also noted that there are many numeric problems with countries in the Mid-Low income level range. This could be explained by the fact that no all countries participate in the GEM project every year. For this reason, there are few observations and a lot of missing values that complicate the estimation of the model.

On the other hand, rich countries have a richer dataset because they can participate continuously in the GEM project. Thus, there is a more balanced panel data set for developed countries which contribute with more observations and a better estimation power is possible. For rich countries, we observe that all of our predictors have the expected sign, and we verified the hypothesis that the more knowledge regarding to sharing economy business model spur people to start thinking more about start an entrepreneurial activity. We can see that in these countries the coefficient of the sharing economy is significantly positive contrary to what is observed in the Low-Mid income level countries, this could be explained due to the technological environment that exist in rich countries which does not exist in the Low-Mid income level countries, if we observe the R&D Transfer coefficient this is positive which implies that the level of R&D Transference increases the entrepreneurial intention. Also, the top sharing economy firms comes from rich countries and this can explain why in this countries people will start more entrepreneurial activities in response to the expansion of the sharing economy firms.

DISCUSSION

The present study's overall aim is to show how the expansion of the sharing economy firms around the world could affect entrepreneurial intention in these countries. We study the contextual drivers of the entrepreneurial intention from a longitudinal perspective using the

random effect model to include the possibility that there are some unobserved characteristics which could explain the entrepreneurial intention.

Our results show that for rich countries, the more knowledge of sharing economy firms increases the interest of people in start an entrepreneurial activity within the next 3 years. This outcome is consistent with Parente et al. (2018) whom stated that the sharing economy globalization phenomenon is increasing the local entrepreneurs and generating jobs in many countries around the world. We also extend the application of the Theory of Planned Behavior with another approach different from the SEM. TPB is still consistent to predict the entrepreneurial intention.

One of the key contribution of this study is that we show that the expansion of this kind of companies like Uber, Airbnb, etc. is not necessarily bad as many governments might think. On the contrary, this kind of innovations shows people that there are many different and novel ways of doing daily things and encourage them to use the technology to facilitate their lives, making easier activities such as take a taxi, reserve an apartment, buy food, book a table in a restaurant and so countless applications of the technologies to improve the way to do things. Our findings should encourage policy makers open the door of the country to these types of companies, but rather, to take advantage of this type of business models and to train their local entrepreneurs and then be able to carry out local enterprises of high technological level.

Our study shows that there is a positive influence of the level of technological development and entrepreneurship ecosystem. Thus, one important thing that policy makers have to keep in mind is the fact a country with lot of restrictive norms and low support to entrepreneurs lead to low level of entrepreneurial intention. This is one of the main reasons that in countries of mid-low level of income, the sign of the sharing economy is negative and in countries with high level of income, the sign is significantly positive.

Finally, our study contributes to link the sharing economy with the TPB and demonstrates that this kind of innovation, in this time when technology usage is growing in an accelerated way, could encourage people to start this kind of entrepreneurs applied to local or regional needs that only people who live in the country knows. New local entrepreneurs could bring a high level of innovation and then a high level of economic growth, we also verified that the theory of planned behavior utilized by other perspective and techniques than the structural equations, remains consistent when estimating the entrepreneurial intention.

LIMITATION

The most important limitation in this study is the difficulty to obtain official data from the companies (e.g., revenues by years, level of use of the applications or websites). Fortunately, we can use the google trend index but it will be useful for future research that this sharing economy firms collaborate providing the data to understand this specific business model. Second, our analysis use mainly data from the GEM Project, so this provides opportunities to use another measures or country level data for future research. Finally, this study includes country level data. It may be interesting to use a multilevel specification model in future researches, combining individual level data.

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Appendix 1. Description of the Latent Variables.

Latent Variable	Antecedents	Definition
Attitude Toward Behavior	KNOENTyy	Percentage of all respondents (18-64): who know someone personally who started a business in the past 2 years.
	NBGOODyy	Percentage of all respondents (18-64): who believe that in their country, most people consider starting a new business a desirable career choice.
	OPPORTyy	Percentage of all respondents (18-64): who think that in the next 6 months there will be good opportunities for starting a business in the area where they live.
Subjective Norms	NBSTATyy	Percentage of all respondents (18-64): who believe that in their country, those successful at starting a new business have a high level of status and respect.
	NBMEDIyy	Percentage of all respondents (18-64): who believe that in their country, you will often see stories in the public media about successful new businesses.
Sharing Economy	Uber Airbnb Lyft OlaCabs	Google Trend Index for Uber Enterprise. Google Trend Index for Airbnb Enterprise. Google Trend Index for Lyft Enterprise. Google Trend Index for OlaCabs Enterprise.
Education	efc_d1	Entrepreneurial level of education at Primary and Secondary.
	efc_d2	Entrepreneurial level of education at vocational, professional, college and university.
Government Support	efc_b2	Government policies bureaucracy, taxes
	efc_c	Government programs
	efc_b1	Government concrete policies, priority and support
Context Support	efc_a	Financial environment related with entrepreneurship
	efc_f	Professional and commercial infrastructure access
	efc_h	Physical infrastructures and service access
	efc_i	Cultural, social norms and society support