Level of education and knowledge, foresight competency and international entrepreneurship: A study of human capital determinants in the European countries

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Abstract

Global economies are involved with enormous activities of internationalization that provide pure and untapped opportunities for entrepreneurs and businesses to place and promote their products. This study set out to improve the understanding of the role of the level of education/ knowledge and foresight competencies, as the elements of human capitals, on international entrepreneurship. Our results reveal that the higher level of education/ knowledge in a country enhances the foresight competencies of entrepreneurs and that they both have a positive influence on effective business creation. The findings of this paper also stress the positive relationship between the effect of business creation and international intensity in economy level. To do so, we applied structural equation modeling (SEM) analysis with the partial least squares (PLS), conducting an empirical analysis of data from twenty-eight European countries.

Introduction

In recent years, international entrepreneurship has been studied throughout scholar literature by multiplicity approaches (Andersson, 2003; Etemad and Lee, 2003; Fernhaber *et al.*, 2007; Dana and Wright, 2009; Glavas and Mathews, 2014; Dimitratos *et al.*, 2016). In the present worldwide environment of internationalization, it is arduous for emerging enterprises and entrepreneurs to stand against the intense and fierce global competition (Chichilnisky and Heal, 1986). In such circumstances, ventures are required to learn about global business and internationalization in order to thrive alongside international firms (Jafari Sadeghi and Biancone, 2017). In this vein, the most prosperous firms are presumably to be ones that are excellent to identify the global opportunities and can develop their competencies to respond them in the shortest possible time (Zahra *et al.*, 2005).

In the rapidly changing business environment, foresight is of great importance to the recognition of opportunities and challenges (Costanzo, 2004; Vecchiato and Roveda, 2014). In this paper, we assume the foresight as the practice of envisioning for exploring the potential opportunities for starting new businesses or developing the existing one. As a crucial element of business-seeking international market development, an entrepreneur's foresight (as considered definition above) enables the business to seek out new international opportunities (Autio *et al.*, 2000; Nummela *et al.*, 2004). In fact, the ability of the entrepreneur to envision the opportunities in global markets facilitates the international market expansion and performance (Oviatt and McDougall, 1994; Autio *et al.*, 2000; Andersson and Evangelista, 2006).

Thus, we define three distinct goals. The first is to have a better understanding of the influence of the level of education and knowledge on the manager's foresight competencies. This research is also into exploring the impact of human capital elements (level of education and foresight) on the successful business creation in a country. The current paper also intends to find out the relationship of the effective business creation in a country with the level of international intensity in that country. Previous research has studied each of these relationships individually (Smith, 2007; Öner and Kunday, 2016; Rhisiart and Jones-Evans, 2016). Nevertheless, they should be considered as part of a whole. For this reason, we develop a model that not only measures the interactions of human capital elements (level of education and foresight) on effective entrepreneurship but also, in the meantime, investigates the effect of entrepreneurial activity on internationalization.

Consequently, The contribution of this study is confined to an empirical attempt to employ existing internationalization and resource-based literature on the role of

foresight in explaining international entrepreneurship. This research also contributes to entrepreneurship scholars by providing deeper insight into how the entrepreneurial activity can cross the border of limitations and develop the impact of internationalization. Moreover, Through giving an insight into the role human capital, it expands the understanding of the international entrepreneurship which can be used by policymakers that seek to promote entrepreneurial activity.

To this end, we begin by defining the concept of international entrepreneurship. This analysis will serve as the basis for setting up our research model and hypotheses. Following that, we describe the methodology utilized, including the data, variables, and methods employed in hypothesis testing. We then highlight the evaluation of the measurement model and results for the structural model as well as a conclusion of the findings. Finally, limitations of the study, future research directions are discussed.

Literature review

In recent years, the literature developed through the focusing on the function of entrepreneurs in internationalization of firms (e.g., Bell *et al.*, 2003; Glavas and Mathews, 2014; Johanson and Vahlne, 2003; Loane, 2005; Oviatt and McDougall, 2005; Welch and Welch, 2004), in which the international entrepreneur is responsible for the internationalization process of firms (Bhuian *et al.*, 2005). Businesses to survive or grow, especially with the fierce competition in the market, must expand beyond their borders (Chen *et al.*, 2016). Going international can also help firms to provide access to new resources, an extension of innovative capabilities, new knowledge acquisition, performance improvement and location advantages (Kim and Hemmert, 2016). However, internationalization could involve much uncertainty and could also be a very intricate and costly process for the business (Wiklund and Shepherd, 2003). Therefore, the success of internationalization lies in the correct adoption of new technologies, implementation, and integration of foreign operations and complex structures (Kim and Hemmert, 2016).

Of the initial literature on internationalization refers to the Uppsala internationalization process (Johanson and Vahlne, 1977) which suggest that firms internationalize on a step by step process by exporting to develop their business activities (Ferreira *et al.*, 2017). However, the Uppsala or stages model of internationalization proved not as relevant as previously considered due to some firms entering foreign markets in a fast and quick process (Ferreira *et al.*, 2017). As a major theoretical development, Oviatt and McDougall (1994) stayed against the

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prior theory of internationalization-related to as the Uppsala view by representing that some firms internationalize quickly. This meant that the previous research on the stages model and also internalization theory that argued firms go overseas to exploit their internally developed knowledge no longer applied to all firms (McDougall *et al.*,1994).

Oviatt and Mcdougall (2005) develop a model of the forces influencing the speed of internationalization. They argue that speed is enabled by technology, motivated by competition, and moderated by the knowledge intensity of the opportunity and the firm's international networks. Internationalization can, therefore, be summarised as the discovery, execution, assessment, and exploitation of business opportunities that add value to the business (Oviatt and McDougall, 2005). A more general argument is that entrepreneurial internationalization involves a time-sensitive and self-reinforcing cycle of relationships (Jones and Coviello, 2005). They describe internationalization as creating value for an organization through a mix of innovation and risk-seeking behaviors that go beyond the international borders of a country (Jones and Coviello, 2005). Recently, researchers have started studying the types of knowledge that are influential in entrepreneurial internationalization (Jones *et al.*, 2011). Spence and Crick (2009) found that knowledge, market knowledge to be more specific, is crucial to shaping the initial and subsequent internationalization of new ventures. They also represent that knowledge and experience help fine-tune the firms' existing strategies, and market penetration is facilitated by experiential, buying and network knowledge.

Building on the wealth material of human capital characteristics, there are specific internationalization entry determinants businesses take before going into a new market including the business orientation of managers (Matiusinaite and Sekliuckiene, 2015). Unger *et al.* (2011) described human capital features as an essential resource needed for the success of a business, and they include an educational level of personnel, experience, skills and even knowledge. Previous business experience of manager helps to create knowledge, which can be applied in the country based on practical skills and help the business manager to identify business opportunities and ways to exploit them (Matiusinaite and Sekliuckiene, 2015). Human capital plays as the primary factor for the investment abroad (Amit *et al.*, 1998), implying that venture capital is a strict process of establishing the perimeter for choosing the right criteria for investments and what will include into it (Manigart *et al.*, 2007). Many of the new companies that want a part of the global market, now in the process of focusing on human capital as a primary tool, due to the international view on the stuffing process the companies have access to the

foreign markets through their stuff, which not only partial to the communication factor, but also influenced by their background knowledge and their cultural differences (Richiardi and Postolachi, 2017). All this informational knowledge is one of the new strategies that now implemented in the different companies, who want to succeed in the global markets (Barney, 1991). As human capital increases as the source of the succession, our understanding and expectations increase as well, which means we need not only foreign (multinational) human capital but also require them to be knowledgeable and intra-changeable.

Literature has devoted a special stress on the importance of the entrepreneur in the international development of the ventures and explored entrepreneurs' general attitude, motivation, orientation, experience and network (Andersson, 2004). The entrepreneur as a proactive individual is especially crucial in growth-oriented industries, for firms in the early phase of the internationalization process. For instance, several authors have discussed that human capitals such as with international vision, international experience, the importance of a founder or management team with international vision, appropriate education and business exposure can contribute as catalysts for internationalization of firms (Bloodgood *et al.*, 1996; Madsen and Servais, 1997; Oviatt and McDougall, 1997). Human capital will not only help to overcome uncertainties and informational asymmetries in foreign markets (Wright *et al.*, 2005) but also provides a competitive advantage for firms in the race to the most prominent part of the market share (Barney, 1991).

This paper is to discuss the contribution of the foresight, as its most promising mission, in entrepreneurial internationalization. It should be kept in mind that foresight is a broad concept that suffers from lacking a coherent theoretical basis (Hideg, 2007; Oner, 2010). However, this study takes advantage of the broad definition (from Joseph Coates) that describes foresight as a purposeful process of developing knowledge about the future of a given unit of analysis or a system of actors, which is aimed at action in the form of public or private policymaking, strategizing and planning, and that foresight is frequently a participatory, involved and collaborative process (Piirainen and Gonzalez, 2015). It is, therefore, necessary that the business manager to evaluate opportunities and have adequate knowledge of the international market before embarking on internationalizing, as lack of knowledge and experience of the market could pose as a hindrance or challenge for the business (Perks and Hughes, 2008). Zucchella *et al.* (2007) mentioned that (early) internationalization by a business can take advantage of a strong international vision in the international market environment. We eventually consider the foresight as the envisioning capabilities of entrepreneurs for exploring the potential

opportunities for starting new businesses or developing the existing one. By this means, an entrepreneur can leverage its knowledge of future trends and opportunities for the strategic decision-making of the venture. In this vein, in accordance with Joseph Coates's definition, education as the element of human capital plays a crucial function.

From this discussion, we can draw out the key factors of human capital that can directly or indirectly influence the decision of entrepreneurs to internationalize their firm. The central principle is to establish a connection between human capital and its effect on the companies, which want to become international. This terminates to explore the function of 'foresight' and "level of the education and knowledge" in the cross-border practices of entrepreneurial firms. The dressing reasons for the significance of each factor are discussed subsequently in detail.

Hypotheses development

An entrepreneur is defined as a person who engages innovation, risk-taking and financial investment to create novel and valuable economic goods, whether tangible or intangible (Yu and Si, 2012; Su *et al.*, 2015). Having regards to the main characteristic of entrepreneurship is creating new businesses, in recent years, entrepreneurs have intended to find untapped international opportunities (Shane, 2003; Casson, 2005), and take advantage from their capabilities to manage the business on the condition of uncertainty (Onetti *et al.*, 2012). Moreover, different internationalization theories are explaining the role of entrepreneurship in the internationalization of businesses (e.g. Ghauri *et al.,* 2014; Li and Gammelgaard 2014). By acknowledging and understanding different business strategies of a variety of companies within the various countries, and having distinct, values, behaviors, beliefs, entrepreneurs can create new ventures in the global context or internationalize their existing enterprises. Reflective of the multidisciplinary nature of both entrepreneurship and international business, Oviatt and McDougall (2005) define international entrepreneurship as "the discovery, enactment, evaluation, and exploitation of opportunities—across national borders—to create future goods and services". In another word, entrepreneurial activities in an existing organization and/or creating a new business to access the global markets promote the internationalization- called international entrepreneurship. Thus, we hypothesize:

H1. The higher level of effective business creation in a country leads to the more internationalization intensity.

In a world of uncertainty, if managers and entrepreneurs desire to access the global markets and benefit from international opportunities, they should study the future trends and predict the possible opportunities and threats. In fact, foresight involves systematic attempts to look into the future of science, technology, society and the economy, and their interactions, to promote social, economic and environmental benefit (Tegart, 2003). Slaughter (1995) states that foresight is a competence which attempts to broaden the boundaries of perception in four different ways (Major *et al.*, 2001): (i) By assessing the implications of present actions, decisions, etc.; (ii) By detecting and avoiding problems before they occur; (iii) By considering the current consequences of possible future events; (iv) By envisioning aspects of desired futures. The anticipation of future and foresight provide insights into organizations' operating environment of challenges and opportunities and identification of innovations and opens up the competitive space (Iden *et al.*, 2016).

Colwell and Narayanan (2010) discuss the importance of foresight activities in shaping an institutional environment that enables entrepreneurial activity. They developed a definition of entrepreneurship as a special case of foresight-entrepreneurs are individuals who enact a unique vision of the future, and show how this view of entrepreneurial action leads to a new view of the basis of competitive advantage for startup firms. On another study, Rhisiart and Jones-Evans (2016) addressed the link between foresight and entrepreneurship over the long term in Wales and found out that entrepreneurship policy and activity declined with a lack of focus and foresight renewal. Yet, foresight tends to be characterized as unexplained prescience on the part of the entrepreneur (Fuller and Warren, 2006). Moreover, future studies are not limited to the internal borders and economy. Then, It can provide insight for the managers who discover opportunities in global markets and help entrepreneurs to mitigate the risks associated with creating new ventures in an international scope. Therefore, we hypothesize:

H2. *The higher the foresight competency developed the more likely the effective business creation in a country.*

According to the resource-based view, a firm's competitiveness is based on its access to valuable and rare resources that are difficult to replicate (Sieger *et al.*, 2011). Firms develop a competitive advantage based on their ability to exploit the potential value of these resources (Barney, 1991). Human capital is one of the required resource necessary to success and it includes knowledge and skills which individuals acquire by investment in education, training, and other types of experience (Becker, 1964; Unger *et al.*, 2011). Parker (2009) considers human

capital as a key factor in an entrepreneur's decision making for employees between paid employment and venture creation. Studies use formal education indicators as proxies for human capital (e.g., Chi and Qian, 2016) because investment in education plays a central role in human capital accumulation (Salike, 2016). However, technical skills and knowledge spillovers are regarded as the other dimensions of human capital which facilitate economic growth and development (Romer, 1986; Lucas, 1988; Chang *et al.*, 2016).

Skills and knowledge spillovers and formal education, in the form of human capital, enhance foresight competencies. Gathering important information about the future and possible future developments and taking advantage of skills and expertise serve as decision support of foresight competencies (Kayser and Blind, 2016). Moreover, individuals seeking to become knowledgeable in the use of strategic foresight and futures studies will be required to become familiar with the use of new tools and concepts, but more importantly, new mental models on how to view the future (Luzinski, 2014). As such, entrepreneurs knowledge level, as an intangible resource, enhance manager's and entrepreneur's foresight competencies, resulting in the increase in the advantage of opportunities and mitigation the future risks (Autio and Sapienza, 2000; Ployhart and Moliterno, 2011). Hence, we hypothesize:

H3. The higher the level of education and knowledge in a country, the more foresight competency developed by the human capital in this country.

Human capital theory in entrepreneurial activities is largely based on the assumption that investment in education leads to higher earnings and is strongly influenced by the resource-based view of the firm (Barney, 1991). Becker (1964) distinguished between general human capital and specific human capital (Jayawarna *et al.*, 2014). General human capital represents the basic literacy and numeracy, while specific human capital refers to the knowledge, skills, and experience that are valuable solely in the context of entrepreneurial activities, usually measured by previous start-up experience (Carter *et al.*, 1997; Sieger *et al.*, 2011). It can be developed through education, training, and experience (Dimov and Shepherd, 2005). Åstbro and Bernhardt (2005) argue that, although those with the strongest human capital are best qualified to be entrepreneurs, their opportunity costs of foregoing employment are higher and they prefer to select secure, well-paid employment. However, according to Williams (2004), individuals with higher stocks of human capital and varied skills are more able to make use of their resources in entrepreneurship than in salaried jobs. This discussion leads us to hypothesize about the relationship between human capital and entrepreneurship.

Furthermore, human capital is one of the fundamental intangible resources for the international development of a company (Rialp *et al.*, 2005; Javalgi and Todd, 2011). What is more, the entrepreneur's human capital (i.e., training and professional or international experience) is one of the essential factors for the success of a business in its initial stages, whether in domestic market or in international context (Autio and Sapienza, 2000; Coviello and Jones, 2004; Castaño *et al.*, 2016). Thus, we hypothesize:

H4. *The higher the level of education/ knowledge the more effective business creation in a country.*

Figure 1 depicts our research model.

Please insert Figure 1 here.

Data and Methodology
Data
The sample data for this study were extracted from the results of 'Adult Population Survey (APS) Global National Level Data 2012' conducted by the Global Entrepreneurship Monitor (GEM, 2016). GEM is the world's foremost study of entrepreneurship, providing custom datasets, special reports, and expert opinion. This database allows obtaining a broad range of primary data about entrepreneurs and defines the total early-stage entrepreneurial activity (TEA) as the proportion of the adult population (i.e., 18–64 years old) in each country (Bosma *et al.*, 2008). Furthermore, Using tried-and-tested methodology and network of local experts, GEM attempts to measure the different characteristics of entrepreneurs, including socio-economic factors, which explain the differences among countries. Therefore, this study takes advantage of the GEM-APS National Level data from 28 European countries (Appendix. Table 6). The description of all latent variables, following the structural equation modeling (SEM) technique, is presented in Table 1.

Please insert Table 1 here

The descriptive statistics of the variables and the correlation matrix are highlighted in Table 2 bellow (Appendix Table 7 presents detailed statistics by country).

Please insert Table 2 here

Methodology

To analyze the data related to indicators in Table 1 and test the model developed earlier and presented in Figure 1, the Partial Least Squares Structural Equation Modeling (PLS-SEM) will be used with the Software SmartPLS. The use of the PLS-SEM model by scholars from different disciplines is on the rise (Hair *et al.*, 2012). This technique of analysis (i) combines formative and reflective variables, (ii) allows to model the measurement errors, (iii) allows to model relationships between multiple dependent and independent variables in a single comprehensive analysis; and (iv) it authorizes to confront a priori hypotheses and theory (Gefen *et al.*, 2000; Ullman and Bentler, 2003; Bowen and Guo, 2011). Compared to the covariance-based SEM such as LISREL and AMOS used primarily to confirm or reject theories, "PLS_SEM is primarily used to develop used to develop theories in exploratory research" as is the case in the current study (Hair *et al.*, 2014, p. 4). It offers the advantage to handle small size samples, without being limited by distribution assumptions and "works with metric data, quasi-metric (ordinal) scaled data, and binarily coded variables (with certain restrictions)" (Hair *et al.*, 2014, p. 16).

The advantages of PLS-SEM for the small size and absence of normal distribution in data have also been stressed by Barclay *et al.* (1995); Monecke and Leisch (2012), and Vinzi *et al.* (2010). The issue has even been discussed at length by Henseler *et al.* (2014) in response to criticisms made by some authors such as Rönkkö and Evermann (2013) to the PLS-SEM. These authors affirm (p. 198) that "As Reinartz *et al.* (2009) show, PLS demonstrates better convergence behavior in the case of small sizes than covariance-based SEM. Our simulations confirm this finding". However, after recognizing the benefits of PLS-SEM for handling small size samples with no distribution considerations, Hulland (1999, p. 195) affirms that this technique "requires its own set of assumptions". One of these assumptions consists in the necessity for the sample size to be "ten times the maximum number of arrowheads pointing at a latent variable anywhere in the PLS path model" (Hair *et al.,* 2014, p. 20). Another assumption requires the measurement models to have "an acceptable quality in terms of outer loadings" (Idem).

To take into consideration these assumptions and given that, on the one hand, our sample has 28 subjects, and on the other hand, Hair *et al.* (2014, p. 21) have developed a table to determine the maximum number of arrows pointing to a

construct with regard to significance level and the minimum level of R^2, we have built our structural model in a way that any latent variable could receive only a maximum of 3 arrows. In addition, if the R^2 of a construct receiving 2 or 3 arrows is 0.75 or lower, the findings will be assessed only at the significance level of 5% and 10%.

As all our constructs are reflective, we will first evaluate the measurement model on the basis of the internal consistency (composite reliability ≥ 0.70), the indicator reliability (loading ≥ 0.70 or if $0.70 \geq$ loading ≥ 0.40, analyze the impact of deletion on AVE), the convergent validity (average variance extracted or AVE ≥ 0.5) and discriminant validity (Fornell-Lacker criterion) (Hair *et al.*, 2011; Hair *et al.*, 2012, 2014; Henseler *et al.*, 2016). Thereafter, we will evaluate the structural model on the basis of the coefficient of determination (R^2), the predictive relevance (Q^2 and q^2), the size and significance of path coefficients (p = 5%; 10%), the effect sized (f2). To this end, bootstrapping and blindfolding calculations will be done. We have used the SmartPLS Software version 3 to carry out these analyses (Temme *et al.*, 2010; Ringle *et al.*, 2015).

Moreover, test on the validity and reliability are administered by using SmartPLS (Table 3). Average variance extracted (AVE) reveals the variance of each indicator and confirms the common variability of the latent variables. The AVE estimate is the average amount of variation a latent construct is able to explain in the observed variables to which it is theoretically related (Farrell, 2009). Each indicator is on average of more than 0.5 can be said to have a high value of convergent validity, meaning that the latent variable explains more than half of its indicators' variance (Hair *et al.*, 2011). Based on our results, all of the indicator variables have the value of more than 0.5, meaning the high level of convergent validity.

Please insert Table 3 here.

R-squared represents the construct variance, which created the model. Falk and Miller (1992) argued that the value of the endogenous latent variables has to be at least 0.1 to considered significant. By this means, all R-squared coefficients in our model are significant with R^2 of 0.847; 0.802; and 0.403 for respectively successful business creation, foresight competencies, and international intensity. In addition, the total construct cross-validated redundancy from the blindfolding analysis values for all variables.

Cronbach's alpha shows the internal consistency of the indicators, confirming the reliability of variables (Helms *et al.*, 2006). A value of more than 0.7 indicates the existence of the internal coherence. Thus, all of the indicators are our study have high reliability, but foresight competencies (Cronbach's Alpha: 0.615) that still are reliable. Based on Chin (1998), an indicator can be said to have good composite reliability if the value is above 0.70. We face high composite reliability in this research. The meaning here is that the indicators used in this study are in accordance with the conditions of the real object of study. The convergent validity of all the constructs is satisfactory as all the AVE are higher than 0.50. Moreover, the Fornell-Lacker criterion is satisfied as the square roots of the AVE of each construct is higher than the construct's highest correlation with any other construct. For example, for the successful business creation, the value 0.912 is the highest than any other correlation between successful business creation and any other construct. The closest correlation value is 0.871 between awareness and intentions.

Empirical results and discussion

The results of analysis of data using SmartPLS (Ringle *et al.*, 2015) software tool obtain the model structure of the loading factor construct that would explain the correlation of the construct of the level of education/knowledge, foresight competencies, successful business creation, and international intensity is pictured in Figure 2.

Please insert Figure 2 here.

In order to support a hypothesis, the p-value needs to be less than 0.05, considering the significance level of 0.05 and 0.01. Otherwise, it will be rejected. More details are presented in Table 4.

Please insert Table 4 here.

Table 5 highlights the direct and overall effects between latent variables and gives extra insight to confirm the hypotheses and support our model.

Please insert Table 5 here.

The test results on hypothesis 1 accept that there is a significant and positive influence of level of successful business creation toward international intensity of an economy as indicated by the value of the original sample estimate of 0.635, the value of p-value of 0.000. The more the endeavor of entrepreneurs to venture a new business result the higher the internationalization intensity in a country. The finding of this study support the findings of Taylor (2013) and Mostafa *et al.* (2005) which state that there is a positive correlation between entrepreneurship and internationalization. Literature explained that successful business creation (as an example of entrepreneurship) is a critical driver of creating value not just inside of borders but even in the global market (Zahra *et al.*, 1999; Hitt *et al.*, 2001; Dimitratos *et al.*, 2004). The preemptive entrance into the global marketplace, as associated with entrepreneurial endeavors (Porter, 1990), can have a positive influence on the cross-border performance of ventures. In this vein, an entrepreneurial firm can restructure its operations and look for innovative projects so as to obtain more achievement in foreign markets (Fuller and Stopford 1994). Focusing on the behavior of small enterprises, Knight (2000) highlights that effective entrepreneurship enhances the global performance of SMEs if they properly address the internationalization challenges. We confirm that entrepreneurs for surviving and/ or developing their organizations, looking for internationalizing as the global market provides them with more opportunities to take advantage of.

The most promising duty of this paper is to investigate the impact of foresight in successful entrepreneurial activities. Our results of the PLS analysis confirms that hypothesis 2 is accepted because foresight competencies have a positive and significant impact on the entrepreneurs looking for international opportunities. This behavior is indicated by the value original sample estimate of 0.666, the value of the p-value of 0.000. The higher foresight competencies lead to a more successful attempt to create a new business. Considering entrepreneurs as individuals who enact a unique vision of the future (Colwell and Narayanan, 2010), they look for creating the future by leading an enterprise to commercial success in using new products and services. Thus, this competency is particularly important to them by providing insights into identification the forthcoming challenges and opportunities and into how to behave with prospect uncertainties. This perception of entrepreneurial opportunities stimulates the willingness and readiness of non-entrepreneurs to get involved in business venturing (Renko *et al.*, 2012; Schillo *et al.*, 2016). Moreover, developing a manager's insight and foresight can make a significant impact on the recognition of potential global market trends and starting a new business in the international arena. This resource is linked to the individual's knowledge and skill

that is required for successful business creation (Lim *et al.*, 2010). By this mean, countries can promote the entrepreneurial practices among the normal population through enhancing foresight competencies for business creation, regardless of their intention to stay domestic or go international.

Our results confirm that hypothesis 3 is accepted, there is a positive and significant effect of education level on foresight competencies as noted by the value of the original sample estimate of 0.896, the value of p-value of 0.000. The higher the level of education and knowledge is, the higher the foresight competencies will become. However, foresight depends upon 'going inside' and use all our faculties including picking up our felt senses, education, knowledge, and skills. Education and knowledge competencies serve foresight by evolving managers' capabilities by developing the capacity for imagining alternative futures, analyzing trends and studying about scenarios and developing them (Loveridge, 2008; Facer, 2011). In addition, DeTienne and Chandler (2004) claim that people can take advantage of the educational qualifications to increase their likelihood of success in opportunity recognition that can lead to new business venturing. Hence, through enhancing entrepreneurial capabilities, a high-quality educational qualification can broaden the awareness of non-entrepreneurs into new business creation (Rae, 2010). Similarly, our finding reveals that formal education, knowledge etc., as elements of human capitals, can enhance entrepreneurs' futures thinking and foster their insight into the consequences of the establishment of new initiatives. Then, we claim that human capital significantly influences foresight competencies.

Finally, as for hypothesis 4, the result is shown that there is a positive and significant influence on education/ knowledge level toward entrepreneurship. This hypothesis approved by the direct coefficient of 0.275 and 10% significance level (p-value of 0.065) while the total effect of human capital on foresight competencies is 0.871 with the value of p-value of 0.000. Therefore, the level of education and knowledge is the more successful business creation rate in a country. Prior studies have shown the different function of education in business venturing. For example, Jacobowitz and Vidler (1982) found that entrepreneurs have less educational levels than normal people. In opposite, Bowen and Hisrich (1986) and Bates (1995) discussed that individual who run new ventures have more educational qualifications compared to non-entrepreneurs. According to Barney (1991), human capital theory suggests that firms with a higher degree of human capital developed through access to employees, more specifically managers, with higher education and expansive personal experience achieve higher performance (Javalgi and Todd, 2011). The findings of this research are in line with Kourilsky's (1995) investigation that

highlighted education have a positive impact of entrepreneurship by preparing people to obtain and develop the "take-a-job" mentality. Therefore, our outcomes confirm that human capitals are key factors for entrepreneurship. We assert that investment on human capital competencies creates the better context for entrepreneurs to become successful in global competition either, as individuals with more knowledge and education are more likely to perform innovative actions and accept novel ideas (Cooper, 1981; Brush and Hisrich, 1991; Kimosop et al., 2016) whether in domestic or global marketplace.

Conclusion
This study sets out to improve the understanding of what drives toward the international entrepreneurship and reveals different considerable results. we investigate the role of human capital in entrepreneurship and internationalization. As such, we focused on the level of education as well as foresight competencies of entrepreneurs who intend to establish a business and desire internationalize it. We found that some of the variables are strongly associated with entrepreneurial internationalization, while one other not.

Employing an SEM analysis for 28 European countries in 2012, we found that an increase in the level of successful business creation in a country positively effects on internationalization intensity of the ventures. Moreover, the findings of this paper revealed that the education level has not only empowers the effective entrepreneurial endeavors but also reinforces the foresight abilities of managers about the future and its opportunities and threats. Moreover, the result that foresight competencies help entrepreneurs to anticipate the future of their organizations and the consequences of their action.

As for implication of our finding, we assert that countries, specifically European nations studied in this research, can improve their employment rate and value creation (through their products in international markets) by giving a special attention to the entrepreneurial-oriented human capitals. This research warns policymakers that they can have a serious contribution in promoting (international) entrepreneurship. They should draw a rigorous plan for formal and informal educational systems that effectively develops essential knowledge for launching new businesses and fosters the innovation and entrepreneurship. If governments desire to develop entrepreneurial activities, emphasis should be put on measures supporting opportunity recognition, entrepreneurial skills and knowledge. In this regard, envisioning and foresight competencies are of crucial elements that assist entrepreneurs and central decision makers to predict future trends, in which they can

purist opportunities and identify the potential threats in domestic and global environments. In addition, this paper bold the relationship between running a business and international intensity of a country and discuss that increase in entrepreneurship leads to more international outcomes. Hence, strategists who are looking for economic development can rely on international entrepreneurship practices as they can bring values via selling products and services abroad.

The limitation of this study lies in the impossibility of obtaining a larger and more complete data. Consequently, this study uses national-level data from 28 European countries, which makes the sample too small. This, in turn, can inflate bootstrapping stand errors, and reduce the statistical validity of the method. The future study can target more countries in different places. As another suggestions, authors, in future, can select one simple economy and empirically test the proposed model adapted to the characteristics of that country. In addition, although innovation is one of the driving factors in both internationalization and entrepreneurship, because of our limitation it has not considered in this study. From a methodological point of view, this paper is dealing with reverse causality as the result of using a secondary database like GEM. The mechanism of sampling in such a database is usually obtaining information from entrepreneurs who are working in on-going businesses in specific time. However, it seems that there is a lack in our knowledge about processes such as exporting that might a long time from inception to a "final" outcome. If the nature of this process changes over the time from short time to long-run consideration, relational analyses will be biased without correction for the length of duration. Hence, we suggest running weighing approach for the future research that is based on this type of dataset.

Appendix

Please insert Table 6 and 7 here.

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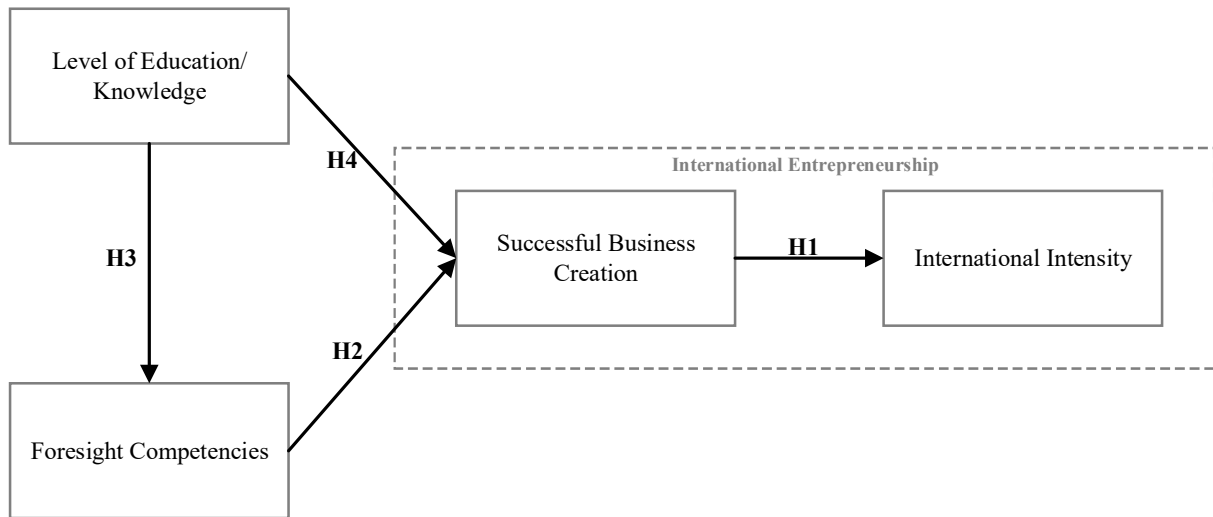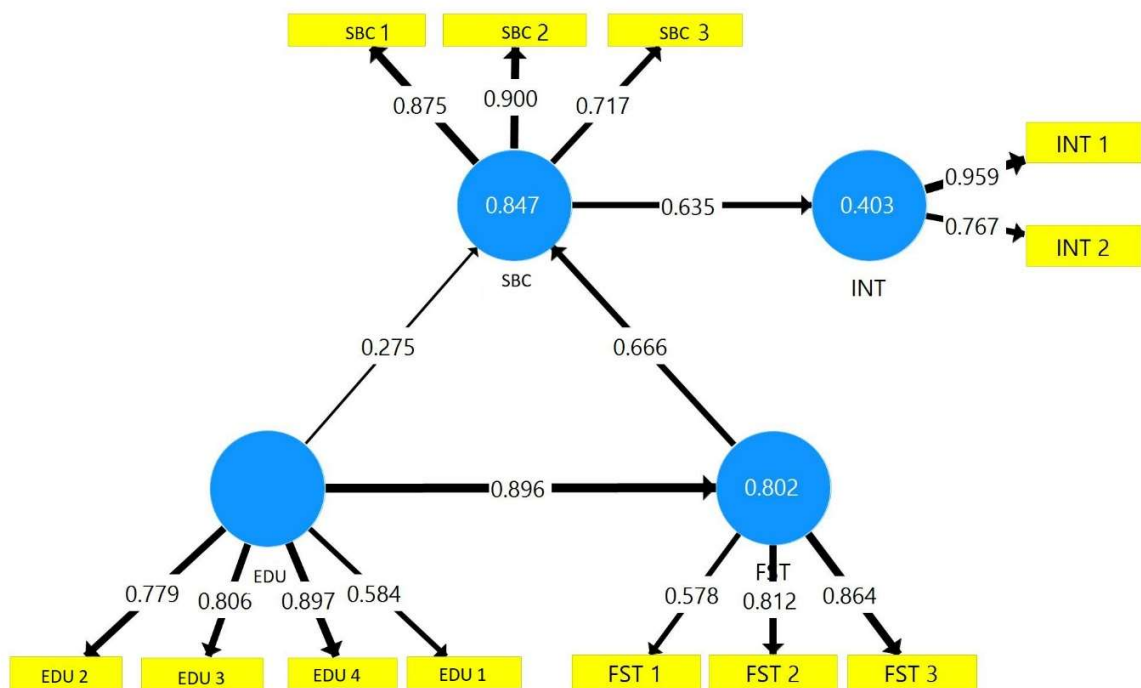
Figure 1. *General model.*

Figure 2. *Estimated general model.*

Table 1. Variable's description.

	Descriptions and measurements
EDU1	Harmonized educational achievement: University.
EDU2	Harmonized educational achievement: Post-Secondary.
EDU3	Harmonized educational achievement: Secondary.
EDU4	Entrepreneurs seeing that they have required knowledge and skills for starting a new business.
FST1	Reporting opportunity as their dominant motive to start a new business.
FST2	Foresight bright future to start a new business.
FST3	Who is expecting to start a new business within the next three years.
SBC1	Who are, alone or with others, currently trying to start a new business.
SBC2	Who have, in the past three years, provided funds for a new business.
SBC3	Who is involved in entrepreneurial activities.
INT1	TEA[*]: Export Intensity. 26-75%.
INT2	TEA[*]: Export Intensity. 76-100%.

Table 2. Correlation matrix and summary statistics.

	EDU 1	EDU 2	EDU 3	EDU 4	FST 1	FST 2	FST 3	SBC 1	SBC 2	SBC 3	INT 1	INT 2
EDU1	1											
EDU2	.506**	1										
EDU3	.574**	.691**	1									
EDU4	0.282	0.240	.434*	1								
FST1	.496**	.692**	.755**	0.191	1							
FST2	.424*	.422*	.595**	.528**	0.114	1						
FST3	.605**	.449*	.582**	.466*	0.222	.706**	1					
SBC1	.725**	.601**	.662**	.444*	.411*	.762**	.873**	1				
SBC2	.603**	.456*	.570**	0.365	.442*	.557**	.591**	.685**	1			
SBC3	.446*	.608**	.702**	.579**	.735**	.430*	0.281	.392*	.557**	1		
INT1	.667**	0.354	.447*	.396*	0.258	.472*	.778**	.740**	.615**	0.289	1	
INT2	0.161	0.101	0.065	0.066	0.181	-0.084	0.334	0.241	.396*	0.094	.554**	1
					Summary statistics							
Mean	11.567	9.823	6.828	42.026	5.445	1.799	15.107	9.245	4.494	13.608	13.090	9.464
Std. Dev.	3.969	3.988	2.411	7.824	2.028	1.175	7.271	4.785	2.062	3.740	6.133	4.462
Min	5.370	4.350	2.820	23.500	2.700	0.400	3.830	4.050	1.570	6.270	2.280	2.300
Max	22.820	19.740	12.300	55.110	11.320	4.540	30.780	20.280	9.340	20.680	25.510	21.260
Skewness	0.621	0.909	0.349	-0.317	1.253	0.802	0.711	0.963	1.004	0.043	-0.055	0.680
Kurtosis	0.806	0.133	-0.452	-0.390	1.608	-0.393	-0.494	-0.234	0.053	-0.326	-0.715	0.461

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[*] Export happened within 42 months of the establishment.

Table 3. Measurement model and structural model indices.

	R²	Q²	Cronbach's Alpha	Composite Reliability	AVE	Discriminant Validity			
						SBC	FST	EDU	INT
SBC	0.847	0.315	0.782	0.872	0.697	0.912			
FST	0.802	0.303	0.615	0.801	0.580	0.775	0.835		
EDU			0.769	0.855	0.601	0.871	0.762	0.896	
INT	0.403	0.035	0.713	0.858	0.754	0.612	0.555	0.475	0.919

Table 4. Regression coefficients and hypothesis test.

	Original	Mean	Std. Dev.	T-Statistics	P-Value
SBC ➔ INT	0.635	0.653	0.082	7.775	0.000
FST ➔ SBC	0.666	0.649	0.171	3.885	0.000
EDU ➔ SBC	0.275	0.293	0.181	1.515	0.065
EDU ➔ FST	0.896	0.890	0.045	20.115	0.000

Table 5. Direct and total effects between latent variables.

	Direct Effects				Total Effects		
	SBC	FST	INT		SBC	FST	INT
SBC			0.635***	**SBC**			0.635***
FST	0.666***			**FST**	0.666***		0.423***
EDU	0.275*	0.896***		**EDU**	0.871***	0.896***	0.553***

*. Correlation is significant at the 0.1 level (2-tailed).
**. Correlation is significant at the 0.05 level (2-tailed).
***. Correlation is significant at the 0.01 level (2-tailed).

Table 6. Name and the code of countries included in the study.

Name	Code	Name	Code	Name	Code	Name	Code
United Kingdom	GBR	Sweden	SWE	Croatia	HRV	Switzerland	CHE
Germany	DEU	Norway	NOR	Romania	ROU	Portugal	PRT
France	FRA	Poland	POL	Austria	AUT	Belgium	BEL
Spain	ESP	Greece	GRC	Lithuania	LTU	Slovakia	SVK
Russia	RUS	Ireland	IRL	Macedonia	MKD	Slovenia	SVN
Italy	ITA	Finland	FIN	Estonia	EST	Latvia	LVA
Netherlands	NLD	Hungary	HUN	Denmark	DNK	Bosnia & Herzegovina	BIH

Table 7. Statistics of studied countries in 2012.

	RUS	GRC	NLD	BEL	FRA	ESP	HUN	ITA	ROU	CHE	AUT	DNK	SWE	NOR
EDU1	6.14	10.49	14.58	9.01	13.51	9.52	12.42	5.37	22.82	11.18	14.70	5.53	11.23	7.98
EDU2	4.35	8.13	15.45	6.28	6.42	6.52	10.47	15.56	12.48	9.65	11.60	5.56	6.70	5.39
EDU3	3.16	4.35	8.38	2.82	4.67	6.25	9.64	4.33	8.11	4.69	7.89	4.67	6.62	6.54
EDU4	23.50	50.00	42.30	37.11	35.66	50.38	39.83	29.97	38.34	37.34	49.61	31.02	36.99	34.37
FST1	2.70	4.56	8.64	3.98	4.17	4.12	6.10	3.10	6.94	4.42	7.80	4.84	5.54	6.00
FST2	1.58	1.95	0.87	0.93	0.94	1.46	2.87	0.68	2.23	1.07	1.04	0.44	0.44	0.50
FST3	3.83	10.45	10.09	10.68	18.92	12.05	15.32	11.82	30.78	8.31	11.56	8.36	11.72	6.68
SBC1	4.22	5.18	6.04	6.34	7.40	4.79	9.63	5.14	20.28	5.42	11.27	4.81	6.80	4.05
SBC2	1.57	3.02	3.57	3.13	2.99	3.85	4.48	2.41	6.23	4.73	6.27	2.98	4.25	3.15
SBC3	6.27	18.41	19.27	10.25	8.17	14.19	17.01	7.63	12.89	14.06	16.97	8.40	11.43	12.26
INT1	2.28	11.99	6.04	2.91	20.71	7.14	11.95	7.13	25.51	16.71	15.35	6.60	13.79	3.79
INT2	2.30	8.64	7.58	5.26	9.41	6.92	6.53	10.12	13.39	8.35	11.13	14.30	8.13	7.58

Table 7. Average statistics of studied countries in 2012 – Continue.

	POL	DEU	PRT	IRL	FIN	LTU	LVA	EST	HRV	SVN	BIH	MKD	SVK	GBR
EDU1	9.58	13.51	13.51	7.82	7.31	13.51	15.60	14.35	14.21	8.79	16.33	8.82	16.59	9.47
EDU2	8.63	7.77	10.48	6.73	7.55	6.58	19.74	17.65	11.82	6.77	9.87	10.27	15.53	11.10
EDU3	10.46	5.74	7.91	3.96	5.77	6.75	10.84	12.30	8.89	4.75	7.55	6.72	9.21	8.20
EDU4	53.89	37.09	46.80	45.16	34.32	39.83	43.56	43.19	44.06	51.32	49.11	55.11	49.73	47.13
FST1	4.98	4.10	5.62	4.37	4.43	4.84	9.67	11.32	5.36	4.88	3.10	3.26	6.49	7.14
FST2	3.81	1.16	1.37	1.73	1.02	1.65	3.38	2.60	2.83	0.40	4.54	3.62	3.63	1.64
FST3	24.17	8.89	16.23	7.97	9.40	19.42	26.87	20.13	23.58	14.68	24.92	29.14	15.57	11.46
SBC1	11.14	5.99	7.70	6.92	5.02	7.74	18.36	14.71	15.13	8.66	18.25	14.65	14.13	9.09
SBC2	4.11	3.00	2.28	3.75	3.11	9.34	7.27	8.72	3.67	3.83	8.16	5.70	7.17	3.08
SBC3	15.15	10.14	13.90	13.90	13.63	14.68	20.54	20.68	11.30	11.21	13.65	13.63	16.36	15.03
INT1	13.76	7.07	14.19	14.07	10.75	18.90	18.09	19.19	22.82	15.54	18.13	17.98	15.24	8.90
INT2	4.85	2.46	9.41	13.87	9.91	21.26	14.25	10.96	16.37	16.44	7.58	8.55	5.28	4.16

Table 7. Statistics of studied countries in 2012.

	RUS	GRC	NLD	BEL	FRA	ESP	HUN	ITA	ROU	CHE	AUT	DNK	SWE	NOR
EDU1	6.14	10.49	14.58	9.01	13.51	9.52	12.42	5.37	22.82	11.18	14.70	5.53	11.23	7.98
EDU2	4.35	8.13	15.45	6.28	6.42	6.52	10.47	15.56	12.48	9.65	11.60	5.56	6.70	5.39
EDU3	3.16	4.35	8.38	2.82	4.67	6.25	9.64	4.33	8.11	4.69	7.89	4.67	6.62	6.54
EDU4	23.50	50.00	42.30	37.11	35.66	50.38	39.83	29.97	38.34	37.34	49.61	31.02	36.99	34.37
FST1	2.70	4.56	8.64	3.98	4.17	4.12	6.10	3.10	6.94	4.42	7.80	4.84	5.54	6.00
FST2	1.58	1.95	0.87	0.93	0.94	1.46	2.87	0.68	2.23	1.07	1.04	0.44	0.44	0.50
FST3	3.83	10.45	10.09	10.68	18.92	12.05	15.32	11.82	30.78	8.31	11.56	8.36	11.72	6.68
SBC1	4.22	5.18	6.04	6.34	7.40	4.79	9.63	5.14	20.28	5.42	11.27	4.81	6.80	4.05
SBC2	1.57	3.02	3.57	3.13	2.99	3.85	4.48	2.41	6.23	4.73	6.27	2.98	4.25	3.15
SBC3	6.27	18.41	19.27	10.25	8.17	14.19	17.01	7.63	12.89	14.06	16.97	8.40	11.43	12.26
INT1	2.28	11.99	6.04	2.91	20.71	7.14	11.95	7.13	25.51	16.71	15.35	6.60	13.79	3.79
INT2	2.30	8.64	7.58	5.26	9.41	6.92	6.53	10.12	13.39	8.35	11.13	14.30	8.13	7.58