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Exploring Country Institutional Profiles on Entrepreneurial Orientation

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Abstract

Cross-country data on entrepreneurial intention and activity (e.g. GEM, GUESS) shows significant differences among countries. Institutional theory offers a valuable framework in terms of regulatory (government policies), cognitive (social knowledge) and normative (value systems) dimensions that define the alternative courses of action open to individuals and firms and, at the same time, help to identify the “why” of the different courses of action.

The present study draws on the construct of a country *institutional profile* to identify normative, cognitive, and regulatory institutional structures that may influence entrepreneurial orientation, understood as the commonly accepted combination of proactive, innovative and risk-taking posture. Using data from 349 firms in nine European countries, the study assesses the impact of the country institutional dimensions on the levels of entrepreneurial orientation.

Results from a cluster analysis provide evidence of heterogeneity rather than precisely defined country institutional profiles at the European level, as these vary according to key firm’s and entrepreneur’s characteristics. Differences are found across the three institutional pillars. In the regulatory clusters, the key differences are based at the individual level, particularly on age and

experience. The low-regulatory cluster is composed by older entrepreneurs with higher experience in national and international markets, as well as in managerial positions. Instead, the high-regulatory cluster is associated with younger and less experienced entrepreneurs.

Experience is also a key variable in the normative dimensions, although in this case only national experience is significant. At the firm level, the type of business and country of origin are also important. The low-normative cluster includes service firms from Italy and France, with experienced entrepreneurs in the local market. The high-normative cluster is represented by individuals with limited national experience and manufacture firms. Regarding the cognition clusters, the main difference is the experience as an employee and the firm's country. High levels of cognition are present in German firms with entrepreneurs with experience as employees. Low-cognition clusters include Italian firms managed by entrepreneurs with limited experience as employees.

For entrepreneurial orientation, significant differences are revealed between higher, average and lower levels of the construct. Low levels of entrepreneurial orientation are present in low-tech firms with lower levels of internationalization. Average levels of entrepreneurial orientation present average levels of proactiveness and innovativeness, but low levels of risk. Firms in this cluster are the oldest and more internationalized of the sample, representing mainly French and Islandic companies. The cluster with high levels of entrepreneurial orientation includes young and high-tech firms with high internationalization.

Results of a multinomial logistic regression substantiate how the dimensions of country institutional profiles affect in a different way the diverse levels of entrepreneurial orientation. Average entrepreneurial levels are more likely than lower levels in high normative contexts; while high entrepreneurial levels are more likely in high cognitive institutional contexts. Additionally, high-tech firms are more likely to have higher levels of entrepreneurial orientation.

This study contributes to existing theories of national institutions by adding evidence on *how* dimensions of institutional country profiles have an impact in a different way entrepreneurial orientation.

Introduction

Cross-country data on entrepreneurial intention and activity, for example GEM, GUESSS and CIS databases, show significant differences among countries regarding their entrepreneurial intentions and activity (Bosma et al., 2010). These differences have also been studied by scholars trying to identify the 'why' of such country-level variances. This study contributes fresh insights to contemporary knowledge of national institutions by adding evidence regarding *how* dimensions of institutional country profiles have different kinds of impacts on entrepreneurial orientation. Among the possible explanations, Levie and Autio (2008) claimed that the presence and strength of

entrepreneurial framework conditions explain the observed differences, while others scholars (e.g. Fayolle et al., 2010; Kreiser et al., 2010) view cultural diversity as the reason. Regardless of the kind of 'contextual' explanation used, the importance of institutions in determining entrepreneurial intention and activity is confirmed by emerging research (Stenholm et al., 2013).

The institutional theory offers a valuable framework in terms of regulatory (government policies), cognitive (social knowledge) and normative (value systems) dimensions that may define the alternative courses of action open to the firms, in this way establishing the framework for the market transactions (Spencer and Gómez, 2004).

Differences between diverse institutional contexts and countries generate diverse conditions that might benefit the development of certain types of firms, strategies and entrepreneurial intentions more than others (Busenitz et al., 2000). Understanding the impact of the institutional environment and the potentially different impact of the three pillars on entrepreneurial intentions and behaviour is of primary importance to policy makers and academia alike. For example, it is still unclear why high levels of entrepreneurial intention in some countries do not translate into actual entrepreneurial activity. Reynolds et al. (1999, p. 43) propose that among the factors that support entrepreneurship, perhaps the most critical is 'a set of social and cultural values along with the appropriate social, economic and political institutions that legitimize and encourage the pursuit of entrepreneurial opportunity'.

Based on the country institutional profile (Busenitz et al., 2000) and the entrepreneurial orientation (EO) (e.g. Covin and Slevin, 1989; Lumpkin and Dess, 1996), the present study aims to assess the influence of the complete set of institutional dimensions on different levels of EO.

Our research is based on primary data collected in nine European countries with 349 respondents. Through a cluster analysis and a multinomial logistic regression, the results from this work will shed further light on how institutional elements impact entrepreneurial behaviour.

The remainder of the paper presents a literature review on institutional theory (Scott, 1995) and institutional country profiles (Busenitz et al., 2000; Kostova, 1997), and their relationship with entrepreneurial orientation (Covin and Slevin, 1989; Lumpkin and Dess, 1996; Miller, 1983). Next, the selected methodology and key measures are introduced, followed by the preliminary results of the cluster analysis and the multinomial logistic regression. Discussion and integration with extant work is followed by reflections on theoretical and managerial contributions and future research avenues.

Literature review

Entrepreneurial orientation (EO) and institutions

Extant research has suggested that EO is a strategic response to a complex set of institutional environment and firm factors, combined with the perceptions that firm managers/entrepreneurs have regarding the interaction of both perspectives (Dickson, 2004). EO '... is demonstrated by the extent to which the top managers are inclined to take business-related risks, to favor change and innovation in order to obtain a competitive advantage for their firm...' (Covin and Slevin, 1989, p. 77). As such, EO is described through combinations of innovativeness, proactiveness and calculated risk-taking behaviours (Covin and Slevin, 1989; Miller, 1983).

Each country is characterized by its idiosyncratic institutional background, and thus national economies may differ significantly in the attitudes, beliefs and behaviours that create and develop EO (Covin and Miller, 2014). In fact, past studies have suggested that diverse national cultural values might affect entrepreneurial cognition levels (Mitchell et al., 2000), risk propensity and entrepreneurial orientation in general (Mueller and Thomas, 2001; Reynolds et al., 1999; Stewart et al., 2007). Kreiser et al. (2010) attempted to measure national culture through some institutional variables. However, the authors focused on the cultural measures (Hofstede, 1986), leaving unexplored the way in which each institutional dimension affects the diverse levels of EO. Only Stenholm et al. (2013) analysed the effects on types and levels of EO at the dimension level, measuring EO in a linear way and using secondary data. Although an important stream of studies has explored how EO varies within diverse cultures by focusing on cultural values, other institutional pillars have been neglected (Ahlstrom and Bruton, 2002; Dickson, 2004).

Scott (1995) was the first to propose three central elements of institutional structures: regulative, cognitive and normative. Although all three of these dimensions relate to the same institutional environment, each of them reflects different facets of it. Moreover, each dimension invokes diverse types of motivations or intentions that lead to different types and levels of adoption and outcomes (Kostova and Roth, 2002). For example, a poor normative environment with regard to entrepreneurial behaviour (i.e. entrepreneurship is not regarded favourably) will impact entrepreneurial intentions, i.e. the desire to become an entrepreneur, negatively. At the same time, a strong regulatory framework that focuses on incentives for entrepreneurs may positively impact entrepreneurial intentions. Finally, the cognitive dimension, and the related perception of skills and competences, influences levels of entrepreneurial orientation or intentions, e.g. innovativeness. For this reason, each of the dimensions should be analysed separately in order to identify their individual effects on the varied contexts and levels of entrepreneurial orientation.

We will now elaborate on such a differentiated role of institutions and theorize the differentiated impact of the three pillars on the dimensions of entrepreneurial orientation.

Breaking down the institutional environment

The regulatory dimension of the institutional profile consists of laws, rules, regulations and government policies in a particular environment that might promote or obstruct entrepreneurial orientation (Stenholm et al., 2013) in a particular place and moment in time. Entrepreneurial behaviours are influenced by laws and regulations because they shape the level of risk involved in the formation of a new business as well as the level of and access to the resources required to achieve such a goal (Autio and Acs, 2010; Busenitz et al., 2000). A favourable regulatory environment in terms of strong entrepreneurial framework conditions instead enhances perceptions of opportunity and builds the foundation for knowledge and innovation spill-overs. In fact, Baumol and Strom (2007) suggested that entrepreneurship is heavily influenced by the regulations adopted by a government and the vigour of their enforcement.

The normative dimension incorporates social norms, values, beliefs and assumptions related to human behaviour (Scott, 1995; Stenholm et al., 2013). A favourable normative dimension means that the practice in question is consistent with the norms and values held by the people (Kostova and Roth, 2002). Therefore, a society with high admiration for individuals starting a new business will encourage entrepreneurial orientation (Busenitz et al., 2000). On the other hand, societies with a negative perception of uncertainty and risk will develop a lower appreciation of entrepreneurial behaviours (Stenholm et al., 2013; Thomas and Mueller, 2000), as they are much less innovation-oriented. In fact, previous research in international entrepreneurship has suggested that the country's culture, values and norms affect the entrepreneurial orientation of its residents (Busenitz and Lau, 1996).

Finally, the cognitive dimension constitutes knowledge, skills and cognitive structures shared by the people in a given country (Busenitz et al., 2000), as well as the frameworks used to categorize and evaluate information (Spencer and Gómez, 2004). Cognitive structures affect the individual's behaviour by shaping the cognitive frames (Kostova, 1997). For instance, in some countries, the required knowledge to start a business might be widely available and dispersed among individuals, while in other nations it is not (Busenitz et al., 2000). With regard to entrepreneurial orientation, it is evident that, e.g. the quality and level of education and the type of knowledge transferred may have an immediate impact on the dimensions of innovativeness and proactiveness, both of which are constituent dimensions of entrepreneurial orientation.

As seen before, all three dimensions of institutional profiles have mixed effects on entrepreneurial orientation. A single and direct relationship therefore might not be adequate in order to analyse their

interaction correctly. We therefore propose an investigative approach in order to be able to isolate such complexity, which we elaborate on in the next section.

Methods

Sample and data collection

The empirical grounding of this study is a multi-industry sample of companies operating in Europe. Companies are drawn from national databases, industry trade groups and national association lists, which cover the largest European markets, such as France, Germany, Italy and Spain, but also smaller national markets, such as Finland, Iceland and the Netherlands. This sample is a sound representation of European companies and their business environments, as it encompasses a combination of the traditional cultural (Gupta et al., 2002), socioeconomic and institutional (Busenitz et al., 2000; Kostova, 1997) environments in Europe. Each company is represented by one respondent who provided information in a self-administrated web-based questionnaire. The questionnaire was developed and pre-tested in English. For pretesting and face validation, we received support from researchers from all countries involved. Subsequently, the final version was translated into the national languages and back-translated until convergence among all national-language versions was reached, thereby ensuring idiomatic, grammatical and syntactical equivalence (Sekaran, 1983).

The total sample includes 349 responses. All observations with more than 15% of missing values were eliminated. We checked for outliers by computing Mahalanobis distances (De Maesschalck et al., 2000; Penny, 1996), which resulted in a final sample of 331 companies.

Our sample consists of 77% male and 21% female respondents, with an average age of 44 years, which matches well the European context of entrepreneurs (European Commission, 2014). At the firm level, the companies have an average (median) age of 9 years and employ 9.5 employees, representing mainly small and young companies and thus mirroring the European small and medium firm universe (92% of European firms in 2014 were micro-enterprises) (European Commission, 2015). The median turnover is 600,000 euros a year, with an average of 23% of this coming from foreign sales. Furthermore, 40.1% of the interviewed firms perceive themselves to be more high-tech, while 23.4% indicated that they were in more traditional (low-tech) sectors. The service sector is predominant (43.4%), 25% is focused on production and 31.6% operates in both sectors, again corresponding to the overall European economic landscape (European Commission, 2015; Eurostat, 2016).

Methodology

The statistical analysis of the current research is divided in two parts. In the first part, a cluster analysis is performed on each institutional dimension and on the entrepreneurial orientation dimensions. The objective of using this method is to identify homogeneous entities and group them in clusters (Harrigan, 1985; Mooi and Sarstedt, 2011). This is a commonly used statistical technique in a variety of disciplines and in the area of entrepreneurship and international business (Denicolai et al., 2015; Hagen et al., 2012; Knight and Cavusgil, 2005; Zahra, 1993).

Following the recommendations of Ketchen and Shook (1996) and Mooi and Sarstedt (2011), the authors applied a two-stage procedure, starting with a hierarchical cluster and followed with a k-means cluster (non-hierarchical). The hierarchical cluster analysis is done based on the Euclidean distance, as it is the most commonly used type when it comes to analysing interval-scaled data, in combination with the Ward method which combines the objects whose merger increases the overall within-cluster variance to the smallest possible degree (Mooi and Sarstedt, 2011). By performing the hierarchical cluster analysis, it is possible to identify the number of clusters to be introduced later in the k-means cluster analysis, according to the agglomeration coefficients. After determining the number of clusters for each institutional dimension and for the entrepreneurial orientation construct, the k-mean cluster analysis produces the best configurations of clusters.

The second part of the analysis involves a multinomial logistic regression, where the dependent variables are the entrepreneurial orientation clusters. This method is useful when the dependent variable is not restricted to two categories. Likewise, this kind of regression allows the researcher to classify the observations based on the values of a set of predictor variables. In the following section, the dependent, independent and control variables used in the regression are explained.

Variables and Measures

Dependent variable: Entrepreneurial orientation

EO was measured using the Miller/Covin and Slater scale (Covin and Slevin, 1989; Miller, 1983), including all original 9 items (please see Table 1 for the items). The scale is commonly used in entrepreneurial research (Anderson et al., 2015) and has also been validated for different cross-cultural settings (Knight, 1997).

Independent variables: Institutional country profiles

The diverse institutional dimensions were measured using Busenitz's et al. (2000) institutional country profiles scale. They tested the scale and determined "a good reliability, strong discriminant validity, adequate cross-cultural validity, and reasonable external validity" (p. 1001). Validating this

scale with the data at hand results in similar loadings and meets the common quality criteria (Henseler et al., 2016).

Control variables

The following additional control variables at the firm level are included: country of origin, age, number of employees and the technological level. The country of origin is measured through a categorical variable that included the following countries: Finland, France, Germany, Hungary, Iceland, Italy, Lithuania, the Netherlands and Spain. The age of the firm and the number of employees are measured as continuous variables. The technological level of the firm is measured using a two-ends scale from 1 to 10, in which the respondents could position their firm between high-tech (1) and low-tech (10) extremes.

Findings

Cluster results

Cluster analysis: Entrepreneurial orientation clusters

Based on the hierarchical cluster analysis for the items regarding the EO construct, it was possible to determine that the optimal number of clusters was three. This is determined by the GAP criterion assessing change of agglomeration (Wagner et al., 2005). The significance of the clusters differences is confirmed using a one-way ANOVA. The mean of each item according to each cluster is presented in Table 1.

Table 1. EO cluster profile

Items	EO clusters		
	Low	Average	High
A strong emphasis on the marketing of tried and true products or services/R&D, technological leadership and innovations	2.38	3.35	3.80
No new lines of products or services/Many new lines of products or services	2.43	3.71	3.91
Changes in product or service lines have been mostly of a minor nature/have usually been quite dramatic.	2.25	3.41	3.82
Typically responds to actions which competitors initiate/initiates actions which competitors then respond to	2.92	3.48	4.11
Is very seldom/often the first business to introduce new products/services, administrative techniques, operating technologies etc.	2.38	3.68	4.32
Typically seeks to avoid competitive clashes, preferring a 'live-and-let-live' posture/adopts a very competitive, 'undo-the-competitors' posture.	2.56	2.63	3.49
A strong proclivity for low-risk projects (with normal and certain rates of return)/proclivity for high-risk projects (with chances of very high returns).	2.69	2.61	3.82

Owing to the nature of the environment, it is best to explore it gradually via timid, incremental behaviour/bold, wide-ranging acts are necessary to achieve the firm's objectives.	2.70	2.68	3.90
Typically adopts a cautious, 'wait-and-see' posture in order to minimize the probability of making costly decisions/adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities.	2.64	2.67	3.85

The first cluster of EO is characterized by a generally low level of all the elements of EO. It is also the cluster with the lower percentage of international sales and is mostly focused on low-tech products/services. It represents around 40% of the Finnish firms, 35% of Icelandic companies and most of the Hungarian and Lithuanian enterprises. On the other hand, the second cluster of EO presents average levels of proactiveness and innovativeness, but low levels of calculated risk. It also presents among the highest percentages of international sales and represents the oldest companies of the sample. Around 40% of French and Icelandic companies belong to this cluster, as well as close to 30% of Finnish and Italian firms. The third cluster of EO is characterized by high levels of all EO dimensions. It is a cluster with a high percentage of international sales, comprised of young firms focused mainly on high-tech products/services. It represents most of the companies from Italy, Germany and the Netherlands. However, an important percentage of Finnish and Icelandic firms also belong to this cluster.

Regulatory dimension clusters

After performing the hierarchical cluster analysis for the items regarding the regulatory dimension, and based on the GAP criterion assessing change of agglomeration (Wagner et al., 2005), the optimal number of clusters was defined as three. Additionally, the significance of the cluster differences is confirmed using a one-way ANOVA. The mean of each item of the scale, according to each cluster, is presented in Table 2.

Table 2. Regulatory dimension clusters

Items	Regulatory clusters		
	Average	Low	High
Government organizations in this country assist individuals with starting their own business.	2.70	1.54	4.04
The government sets aside government contracts for new and small businesses.	2.53	1.35	2.55
Local and national governments have special support available for individuals who want to start a new business.	2.77	1.46	3.90
The government sponsors organizations that help new businesses develop.	2.73	1.55	3.85
Even after failing in an earlier business, the government assists entrepreneurs in starting again.	2.32	1.32	3.28

The significant differences among the regulatory clusters are mainly based on the individual data. The first cluster of the regulatory dimension is characterized by an average level of regulations and an average level of experience in national and international markets. As a manager, the respondent has around 6 years of experience on average and the firm is mainly focused on B2C activities. The second cluster presents low levels of regulations. However, the respondents were the oldest and the most experienced in national and international markets and in managerial positions. The firms were also mainly focused on B2C activities. The third cluster is characterized by high levels of regulations. However, in this case, the respondents are the youngest and least experienced in all fields (national, international or managerial). Moreover, the companies in this cluster are mainly focused on B2B activities.

Normative dimension clusters

After completing the hierarchical cluster analysis for the items regarding the normative dimension and applying the GAP criterion assessing the change of agglomeration (Wagner et al., 2005), the optimal number of clusters was determined to be three. The significance of the cluster differences is confirmed using a one-way ANOVA, and the mean of each item of the scale according to each cluster is presented in Table 3.

Table 3. Normative dimension clusters

Items	Normative clusters		
	Average	Low	High
Turning new ideas into businesses is an admired career path in this country.	3.51	1.88	4.30
In this country, innovative and creative thinking is viewed as the route to success.	3.40	1.82	4.35
People in this country tend to greatly admire those who start their own business.	2.87	1.81	4.12
Entrepreneurs are admired in this country.	2.91	1.72	4.20

Significant differences among clusters are found mainly in national experience and the nature of the business (goods or services). There are also significant differences between countries. The first cluster of the normative dimension is characterized by an average level of social norms and national experience. Most of the firms from Germany, Finland and the Netherlands belong to this cluster. However, around 40% of Italian and Icelandic firms also form part of this cluster. The second cluster presents low levels of norms, is highly focused on services and has the most experienced managers. Most of the Italian and French firms fall into this cluster. However, 40% of Finnish companies also belong to it. The third cluster is characterized by high levels of norms. It is mainly focused on goods

production and it includes the firms with the least experience. It is mainly represented by Icelandic firms.

Cognitive dimension clusters

After completing the hierarchical cluster analysis for the items regarding the cognitive dimension and using the GAP criterion assessing change of agglomeration (Wagner et al., 2005), the optimal number of clusters was determined to be two. The significance of the cluster differences is confirmed using a one-way ANOVA. Additionally, Table 4 provides a summary of the means of each item according to each cluster.

Table 4. Cognitive dimension hierarchical clusters

Items	Cognitive clusters	
	High	Low
Individuals know how to legally protect a new business.	3.03	1.83
Those who start new businesses know how to deal with a lot of risk.	3.04	1.79
Those who start new businesses know how to manage risk.	3.17	1.97
Most people know where to find information about markets for their products.	3.44	2.18

The only significantly different variables between the two clusters are employee experience and country of origin. The first cluster of the cognitive dimension is characterized by high levels of cognition and more experience as an employee. Most of the firms from Germany, Hungary and Lithuania belong to this cluster. However, almost 50% of the companies from France and the Netherlands also fall under this category. The second cluster presents low levels of cognition and less experience as an employee. Most of the Italian, Finnish and Icelandic firms belong to this cluster.

Multinomial logistic regression

Initially, a multinomial logistic regression with main effects is performed for all 9 countries. In the dependent variable, EO, the first cluster (Low EO) is used as a reference category. Although the full model produced statistically significant results and its goodness of fit (measured through the Pearson chi-squared statistic) suggests that the model fits the data well, the model presented unexpected singularities in the Hessian matrix. After analysing the dependent variable and the predictors, three of the countries (Lithuania, Hungary and Spain) were identified to be a constant predictor, so we combined the categories.

The resulting model's goodness of fit (measured through the Pearson chi-squared statistic) suggests that the model fits the data well. Furthermore, the full model is statistically significant. However, not all independent variables were significant. Among the independent variables, only the level of

technology (high/low-tech) of the firm, the company age, the cognitive dimension and the country are significant as illustrated in Table 5.

Table 5: Likelihood ratio tests

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	454.128 ^a	.000	0	.
High/low-tech	469.696	15.568	2	.000
Company age	464.472	10.345	2	.006
N. of employees	455.630	1.503	2	.472
Regulatory	458.144	4.017	4	.404
Cognitive	463.207	9.080	2	.011
Normative	460.295	6.168	4	.187
Country	478.381	24.254	12	.019

From the model, it is possible to conclude that it is more likely for a firm to have average EO than low EO if the firm is in a high normative institutional context rather than in an average normative institutional context. However, when comparing low levels of EO with high levels of EO, other predictors are significant when comparing average EO with low EO. In this case, it is more likely for a firm to have high EO than low EO if the firm is in the high-tech industry rather than in the low-tech industry. In addition, it is more likely for a firm to achieve high EO than low EO if the cognitive institutional context is high rather than low and if the firm is in Italy rather than in Finland, Lithuania, Hungary, Spain or Iceland. Table 6 shows the results in more detail.

Table 6: Parameter estimates

Cluster of EO		B	Std. Error	Wald	df	Sig.	Exp (B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
Average	Intercept	1.198	.812	2.177	1	.140			
	High/low-tech	-.010	.068	.024	1	.877	.990	.867	1.130
	Company age	.010	.008	1.696	1	.193	1.010	.995	1.025
	N. of employees	-.001	.001	.478	1	.489	.999	.998	1.001
	Reg. average	.394	.529	.555	1	.456	1.483	.526	4.179
	Reg. low	-.392	.521	.568	1	.451	.675	.243	1.875
	Reg. high	0 ^b	.	.	0	.	.	.	.
	Cog. high	-.174	.425	.168	1	.682	.840	.365	1.933
	Cog. low	0 ^b	.	.	0	.	.	.	.
	Norm. average	-1.064	.498	4.567	1	.033	.345	.130	.916
	Norm. low	-.283	.550	.266	1	.606	.753	.257	2.211
	Norm. high	0 ^b	.	.	0	.	.	.	.
	Finland	-1.085	.594	3.335	1	.068	.338	.105	1.083
	France	-.654	.798	.670	1	.413	.520	.109	2.488
	Germany	.105	.926	.013	1	.909	1.111	.181	6.819
	Lithuania, Hungary, Spain	-2.475	1.163	4.526	1	.033	.084	.009	.823
	Iceland	-.763	.577	1.751	1	.186	.466	.151	1.444
Netherlands	1.636	1.194	1.879	1	.170	5.136	.495	53.303	
Italy	0 ^b	.	.	0	.	.	.	.
High	Intercept	2.474	.795	9.686	1	.002			
	High/low-tech	-.228	.069	11.000	1	.001	.796	.696	.911
	Company age	-.019	.010	3.417	1	.065	.981	.962	1.001
	N. of employees	.000	.001	.137	1	.711	1.000	.999	1.002
	Reg. average	.558	.539	1.072	1	.301	1.748	.607	5.031
	Reg. low	.168	.533	.099	1	.753	1.182	.416	3.358
	Reg. high	0 ^b	.	.	0	.	.	.	.
	Cog. high	.887	.399	4.929	1	.026	2.427	1.109	5.308
	Cog. low	0 ^b	.	.	0	.	.	.	.
	Norm. average	-.560	.495	1.280	1	.258	.571	.216	1.508
	Norm. low	-.306	.552	.306	1	.580	.737	.250	2.174
	Norm. high	0 ^b	.	.	0	.	.	.	.
	Finland	-1.269	.593	4.573	1	.032	.281	.088	.900
	France	-1.084	.838	1.675	1	.196	.338	.066	1.746
	Germany	-.488	.866	.318	1	.573	.614	.112	3.347

Lithuania, Hungary, Spain	-1.748	.699	6.264	1	.012	.174	.044	.684
Iceland	-1.640	.587	7.800	1	.005	.194	.061	.613
Netherlands	1.131	1.152	.965	1	.326	3.100	.324	29.645
Italy	0 ^b	.	.	0	.	.	.	.

a. The reference category is 1.

b. This parameter is set to zero because it is redundant.

Discussion

The cluster analysis provides several interesting results. First, concerning EO, it is clear that there are three distinct groups. The first one is a cluster characterized by low EO in general, low-tech and low internationalization, which seems to describe a really national and traditional firm. The second cluster, on the other hand, presents higher levels of proactiveness and innovativeness, but still has low levels of risk-taking. However, it includes older firms which are highly internationalized. This cluster seems to describe firms which the literature describes as followers, as they are not the first in the market because they avoid risks, but they do export and develop. The third cluster seems to describe highly technological firms, which are international, young and have a high level of EO. These firms could be described as what is commonly known in the literature as the international new ventures. Such a clear division on EO is in line with the literature (McDougall, 1989), and thus we believe this could be a reliable dependent variable.

Regarding the different clusters of the institutional dimensions, it was possible to determine that the differences among each dimension cluster were based on different firm and managerial variables. The differences in the regulatory dimension were mainly driven by the experience of the entrepreneur, which seems to suggest that dealing with regulations is something that can only be learned with experience. As entrepreneurs had more experience, they perceived lower levels of regulation. This is probably because with time, entrepreneurs learn how to deal with regulations, which thereby reduces the regulation barrier. Additionally, there were no significant differences at the country level. This makes sense, as the sample was composed of European countries, all of which were from the European Union, so the regulations between countries are quite similar.

The normative dimension differences among clusters depended on national experience. This matches with the theory, as the normative dimension is based on social rules that belong to a certain culture. Such rules cannot be learned, but must be experienced inside each context; for this reason, the key difference is the national experience. The cognitive dimension, on the other hand, presented surprising results, as the main significant difference between clusters was the experience as an employee and the country. Previous studies (Zahra et al., 2005) have already explored the fact that

cognition differs among countries; however, the relationship between cognition and experience as an employee is new. We believe that the link between employee experience and cognition is based on learning.

Regarding the multinomial logistic regression, the results confirm that at different levels of EO, the institutional dimensions have different effects. The likelihood of reaching an average EO level rather than a low EO level is tied to a high normative dimension rather than an average normative dimension. This is an interesting result, as it shows that regarding average levels of EO, the firms must know the social rules, as knowing only some of them will likely lead to a lower EO level.

On the other hand, high levels of EO were confirmed to be related to young, high-tech firms with high levels of cognition. This shows how important the role of the cognitive dimension is in promoting high levels of EO. Additionally, our results match with GEM and GUESSS data, as being an Italian firm was associated with a higher likelihood of having high EO. In fact, according to GEM and GUESSS data, Italians present among the highest levels of entrepreneurial intention.

Implications

The current study contributes to entrepreneurship and business literature by identifying some key variables that affect the differentiation between the levels of regulatory, cognitive and normative institutional dimensions. Moreover, the results of this research also contribute to the new stream of research on linking institutional theory with entrepreneurial intention and provide more detail on how the diverse levels of entrepreneurial orientation might be affected by different levels of the institutional dimensions.

Although in the present research the single pillars are hypothesized to impact EO individually, we also propose that future research should consider combined effects. For example, in many poor countries, entrepreneurial activity is commonly developed as a necessity. In such economies, therefore, while enabling entrepreneurship may be desirable, more basic requirements, such as primary education, may be needed and may thus be prioritized (Bosma et al., 2010).

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