

## What Explains the Varying Degree of Export? Internal or External Factors

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### ABSTRACT

**Objective:** The objective of this article is to determine and analyse export conditions by combining the entrepreneurial resource perspective and formal institutional approach.

**Research Design & Methods:** Drawing on a representative sample of global nascent entrepreneurs, cross-level (random-effects) moderation analysis is applied to explicate the influence of a country's formal institution on the relationship between entrepreneurial resource-based determinants and the degree of export, and this method enables the study of country-level slopes.

**Findings:** The results suggest that there is a positive relation between self-efficacy and export and that people who have the willingness to pursue decisions or courses of action associated with uncertainty are more likely to export. In addition, the research findings also confirm the positive moderating effect of formal institutions on entrepreneurial resource aspects and the degree of export.

**Implications & Recommendations:** The findings of the study have implications in particular for policy-makers who are interested in encouraging early export by influencing institutional dimensions. Policymakers have largely concentrated on institutions to increase entrepreneurial opportunities, but institutions may not be sufficient to stimulate international entrepreneurship.

**Contribution & Value Added:** The originality of this work lies in adopting a more comprehensive approach in studying export by integrating entrepreneurial resource perspective with the institutional dimensions.

**Article type:** research paper

**Keywords:** export; institutions; entrepreneurial resource aspects; risk attitude

**JEL codes:** F10, D02, L26

Received: 26 June 2017

Revised: 12 March 2018

Accepted: 27 April 2018

### Suggested citation:

Li, T. (2018). What Explains the Varying Degree of Export? Internal or External Factors. *Entrepreneurial Business and Economics Review*, 6(2), 29-43. <https://doi.org/10.15678/EBER.2018.060202>

## INTRODUCTION

The drivers behind early-stage entrepreneurial firms going international have been a subject of increasing interest in international entrepreneurship (IE) research (Rialp & Knight, 2005; Nadkarni & Barr, 2008). However, relatively few studies of international entrepreneurship have empirically investigated the link between resource factors and the decision of early-stage entrepreneurs to export in particular. Given that much less attention has been paid to the national institutions which could mobilise and enable entrepreneurial resource factors to support the international expansion behaviour, this neglect may have contributed to the inconsistent findings in the relationship between entrepreneurial resource aspects and export. Therefore, this study first examines how entrepreneurial resources determinants in terms of self-efficacy and risk attitude exercise different influences of the extent of export. In addition, it assesses how the relationship between entrepreneurial resource and the degree of export can be modified by varying formal institutions of more than 60 countries.

Wright and Ricks (1994) identified international entrepreneurship and early-stage entrepreneurial firms as the emerging research area trending with greater methodological sophistication in the field of IB research. The early definition of international entrepreneur excluded already established firms and only focused on IB activities of new ventures (McDougall, 1989). The export phenomenon of 'born global' firms has been observed and researched recently. For example, 'Innovation, Organizational Capabilities, and the Born Global Firm' by Knight and Cavusgil (2004). They identified born global firms as these new international business organisations that reject the idea of long-term domestic business before export and focus more on the superior international business performance from the application of entrepreneurial-based resources for international entrepreneurship (Kinghts & Cavusgil, 2004). In the beginning, most of the born global research was focused mostly on the export process of firms but later more resource-based aspect is introduced to recognise the dynamic nature of international entrepreneurship. Fan and Phan (2007) argued that the export of entrepreneurs is affected by cultural and economic factors of the home country alone with other static factors like the size of the firm's home market and by its internal entrepreneurial resource (Fan & Phan, 2007; Liu, 2017).

Baumol (1990) argued that changing institutional environment results in a various level of institutional context and thus resulting in different entrepreneurial activity for each environment. His research was enhanced further when Whitley (1999) identified and linked three aspects of institutional context; the financial system, the skill development and control system and the state, to shape the business environment for a country. The positive relationship between entrepreneurial effort and the country's financial and educational activities is also researched suggesting that institutional characteristics significantly influence the entrepreneurial effort of a country (Głodowska, 2017; Głodowska & Wach, 2017).

The objective of this article is to determine and analyse the export conditions by combining the entrepreneurial resource perspective and formal institutional approach. Drawing on a representative sample of global nascent entrepreneurs, cross-level (random-effects) moderation analysis is applied to explicate the influence of a country's formal institutions on the relationship between entrepreneurial resource-based determinants and the degree of export, and this method enables the study of country-level slopes.

Drawing on existing literature, section two and three briefly establish hypothetical relationships between entrepreneurial resource and the degree of export and deliberate the moderating effect of formal institutions and presents our hypotheses. Section four describes the dataset and the measurement. Section five focuses on the methodology and our approach to testing the hypotheses. Section six presents the results and conclusions.

## LITERATURE REVIEW

### Entrepreneurial Resource Aspects

Penrose (1959, p. 9) defined a firm as ‘a collection of physical and human resources’ and pointed to the heterogeneity of these resources. The term ‘resource’ is conceived widely as ‘anything that can be thought of as a strength or a weakness’ of the firm. The literature has addressed implicitly many resource issues. Following Penrose (1959), entrepreneurial resource refers to the characteristics of business owners, who are primarily responsible for the growth of the firm (Penrose, 1959; Dobbs & Hamilton, 2007). The relationship between decision-maker characteristics and the degree of export has been a much-researched issue. RBV provides a theoretical framework in which the variable can be anchored. Early research from Miesenbock (1988) argued that the key variable in business export is the decision-maker in a firm. Vatne (1995) presented a model on the export of SMEs in manufacturing activities, suggesting that social networking and an entrepreneur’s quality may influence a firm’s ability to identify and acquire external resources. Later, O’Farrell, Wood and Zheng (1998) extended the model to incorporate the export of SMEs engaged in business service activities. They asserted that a variety of demand-side factors affect the reasons for foreign market entry, while supply-side factors can influence a business service firm’s ability to export. The supply of suitably educated and experienced business owners with a wide variety of entrepreneurial resource can lead to higher proclivity towards the export of firms that have internal competencies to sell specialised and innovative services internationally. Cooper (1994) suggested that the single most important influence upon the ability of an individual is the previous work experience of a founder. According to current research, the central mechanisms of the decision-maker include entrepreneurial self-efficacy and entrepreneurial risk attitude (Chrupała-Pniak, 2017; Dawson & Henley, 2012; Kowalik, 2017; Westhead, 1995). Therefore, we posit:

- H1:** Self-efficacy impacts export by early-stage entrepreneurial firms in such a way that entrepreneurs with a higher level of self-efficacy are more likely to choose a higher degree of export.
- H3:** Risk attitude impacts export by early-stage entrepreneurial firms in such a way that entrepreneurs who are more risk-tolerant are more likely to choose a higher degree of export.

### Formal Institutions

While internal attributes of firms are important aspects in export, they are affected by national institutions (Zahra, Korri, & Yu, 2005). In particular, scholars have suggested that export behaviour is not only driven by entrepreneurial resource aspects as emphasised by traditional strategy research (Barney, 1991; Porter, 1980); it is also a reflection of the formal constraints of a specific institutional context in which entrepreneurs are embedded (Oliver,

1997; Scott, 1995). Prior research claims that since a business venture generated by an entrepreneur exists and competes in a business environment, an assessment of the relevant institutional context should be part of the decision-making process (Naffziger, 1994). North (1990, p. 3) defined institutions as ‘the rules of the game in a society’, or more formally, ‘institutions are the constraints that shape human interaction’. Dunning and Lundan (2008) argued that export behaviour is enabled or constrained by a multitude of formal institutional forces including elements that both promote and hinder the upgrading of resource aspects. More specifically, the institution-based view contends that formal institutional environments in which a firm operates significantly shape the efficacy of its operations and performance (e.g. Hoskisson, Eden, Lau, & Wright, 2000; Scott, 1995). Buckley, Clegg, Cross, Zheng, Voss and Liu (2007) asserted that consistent and liberal regulatory policies enacted by home country governments can increase the self-efficacy level among business owners and encourage engagement in expansion abroad. Similarly, the study by Chen, Greene and Crick (1998) on business founders and non-business founders suggested that supportive institutions increase the self-efficacy level among business owners, which might further facilitate their international expansion because individuals examine their capabilities more favourably with regards to perceived opportunities, resources, and conditions in the global market. Entrepreneurs’ attitudes towards risk are a contextual phenomenon (Fama & French, 1993; Wiseman & Catanach, 1997; Wiseman & Gomez-Meija, 1998). A recent study on risk attitude in psychology pointed that external cues to the risk-taking attitude are contingent on the degree to which they are recognized to affect the probability of business failure (Cacciotti, Hayton, Mitchell, & Giazitzoglu, 2016). Birney, Burdick and Teevan (1999) argued that under the threat of institutional environment characterised by inadequate legal framework the fear of failure is more instrumental for business decision and behaviour. On the other hand, Luo, Xue, and Han (2010) demonstrated that governmental institutional context, such as policies to promote outward foreign direct investment offset the perceived risks of being competitive disadvantages of EMNEs and thus stimulate entrepreneurs to expand into the global market. Likewise, Chen *et al.* (1998) argued that a risk-taking attitude can be derived, modified, and enhanced through variations in the institutional forces, leading to a high intention to export. Thus, this article argues that the influence of entrepreneurial resource factors on export behaviour can be moderated by national institutions.

- H3:** National formal institutions moderate the relationship between entrepreneur’s self-efficacy and the degree of internationalization in that the relationship is stronger when the national institutional conditions are stronger.
- H4:** National formal institutions moderate the relationship between entrepreneur’s risk-attitude and the degree of internationalization in that the relationship is stronger when the national institutional conditions are stronger.

## MATERIAL AND METHODS

### Sample and Design

The theoretical framework will be tested using a multilevel design in which entrepreneurs (Level 1) are nested within countries (Level 2). The data come from four independent sources. The individual-level data will be collected from the Global Entrepreneurship Monitor-Adult Population Survey (GEM-APS). The data for the country-level variables are taken

from the Global Entrepreneurship Monitor-National Expert Survey (GEM-NES). GEM dataset identifies (1) nascent entrepreneurs (individuals who are active in the process of starting a new firm during the preceding 12 months and with expectations of full or part ownership, but have not launched one yet) and (2) young entrepreneurs (owners-managers of new firms who have survived for 42 months and have paid wages to any employees for more than three months) as early stage entrepreneurs. The final dataset forms a database of 63.794 observations from 64 countries.

**Dependent Variable**

Although multiple-item measures appear to be reliable, Ramaswamy, Kroeck and Renforth (1996) cautioned that aggregating components may hide the effects of each individual component. This study hence applies a single-item measure of the extent of export as defined by the percentage of sales in foreign countries to the total venture sales from GEM survey data.

Specifically, it identifies the status of export of only nascent or young entrepreneurs by asking all of the identified nascent or young entrepreneurs – ‘What proportion of your customers will normally live outside your country?’ GEM puts the individual-level responses across five categories. – (0 = No export; 1 = greater than 0 and less than 25; 2 = 25% and less than 50%; 3 = 50% and less than 75% and 4 = 75% and up to 100%). The dependent variable is categorical in nature and presents an evenly distributed range of the percentage of export.

**Independent Variables**

**Individual-Level Predictors**

Entrepreneurial resource measures. Entrepreneurial resources refer to the characteristics of business owners, who are primarily responsible for the growth of the firm (Penrose, 1959). According to Urbano, Alvarez and Turro (2013), the central mechanisms in entrepreneurial resources were measured by self-assessments of entrepreneurial ability and entrepreneurial risk attitude. In this study, self-assessments of entrepreneurial ability will be captured dichotomously, generating a binary variable coded 0 for No and 1 for Yes to the question – Do you have the knowledge, skill and experience required to start a new business? Risk attitude is defined as a personality trait concerning willingness to pursue courses of action or decisions under uncertainty regarding success or failure outcomes (Jackson, 1994). It is measured with the statement: ‘Would fear of failure prevent you from business activities?’ (yes = 1, no = 0).

**Country-Level Predictors**

National formal institutions. This article uses eight items developed by Bowen and De Clercq (2008) to measure the institutional context at the country level referring to entrepreneurial finance, government policies, governmental programmes, R%D transfer, commercial and services infrastructure, market openness, physical infrastructure, and intellectual property rights. We conducted a principal component analysis, a well-known dimensionality reduction technique, to aggregate these items into an index.

$$I = \sum_i w_i p_i \tag{1}$$

where:

$$i = 1,2, \dots, 8.$$

If  $p_i$  represents the  $i^{th}$  principal component, explaining  $w_i$  proportion of variation in the data, the index  $I$  is calculated as the weighted average of the principal components where the proportion of variation used are the weights. Hence, note that all the components are used to calculate the index, thus capturing 100% of the variation in the data (Krishnakumar & Nagar, 2008). It employed the reliability and validity test of institutional measures (Cronbach's  $\alpha=0.955$ ).

### **Control Variables**

Given the greater propensity of men towards export compared to women (De Carolis & Saporito, 2006), this study controls for gender (male = 1, female = 2). Empirical evidence also demonstrates a significant relationship between age and export level (Westhead, 1995). It therefore includes age variables to verify this relationship. Other evidence implies that age may have an inverted-U effect on export propensity (Hayton & Cacciotti, 2013). We thus include both respondents' age and age-squared as control variables. To control for industry effects on export, we will construct four industry dummies on the basis of a 1-digit industry classification for extractive industry, transforming industry, business services and consumer-oriented industry. In the analyses, extractive industry will be taken as the reference category.

### **Common Method Variance**

Scholars are cautious and recommend both procedural and statistical methods to minimise the possibility of common variance bias (Podsakoff, MacKenzie, & Lee, 2003). Given that this study relies on the same respondents to obtain cognitive constructs and individual controls, it assesses the potential for common method bias. This study conducted the Harman's one-factor test (Podsakoff & Organ, 1986), a technique often adopted by researchers to examine whether common variance bias is a concern. All individual-level variables were entered into an exploratory factor analysis and the results indicated that no single factor emerged, nor was there a general factor that could account for the majority of variance. Therefore, it indicates that common method bias is not a major concern in this study.

### **Multilevel Ordinal Logistic Model**

Because there is a discrete number of values for dependent variables and these values can be rank-ordered, the impacts of covariates on the extent of export will be analysed using an ordinal logit model. Given that this study combines individual-level respondents with national-level measures, the data are analysed using hierarchical modelling methods.

In hierarchical modelling methods, fixed effects deal with individual variables that exert impacts on the dependent variable. In order to predict the effects of country-level characteristics (level 2) on the extent of export, this article will also apply random effects that include unobserved country-specific intercepts and country-specific slopes. This will enable the intercept and slopes to vary randomly across countries in order to model unobserved country-level heterogeneity, and it will also allow for more accurate tests of cross-level interaction effects (Martin, Cullen, Johnson, & Praveen, 2007). The model specification is given as below:

$$Y_{ij} = \begin{cases} 0 & \text{if } y_{ij}^* \leq c_1 \\ 1 & \text{if } c_1 < y_{ij}^* \leq c_2 \\ 2 & \text{if } c_2 < y_{ij}^* \leq c_3 \\ 3 & \text{if } c_3 < y_{ij}^* \leq c_4 \\ 4 & \text{if } c_4 < y_{ij}^* \leq c_5 \\ 5 & \text{if } c_5 < y_{ij}^* \end{cases} \quad (2)$$

$$y_{ij}^* = \beta_{0j} + \beta_{1j} \text{Selfefficacy}_{ij} + \beta_{2j} \text{Risk}_{ij} + \sum_{k=5}^K \beta_k \text{Individual Controls} + e_{ij}$$

$$\beta_{0j} = \beta_0 + u_{0j}; \beta_{1j} = \beta_1 + \beta_3 \text{Ins}_j + u_{1j}; \beta_{2j} = \beta_2 + \beta_4 \text{Ins}_j + u_{2j}$$

where:

$y_{ij}^*$  - is the latent dependent variable for respondent  $i$  in country  $j$ ;

$\beta_{1j}, \beta_{2j} \dots$  - are the coefficients for major covariates and control variables.

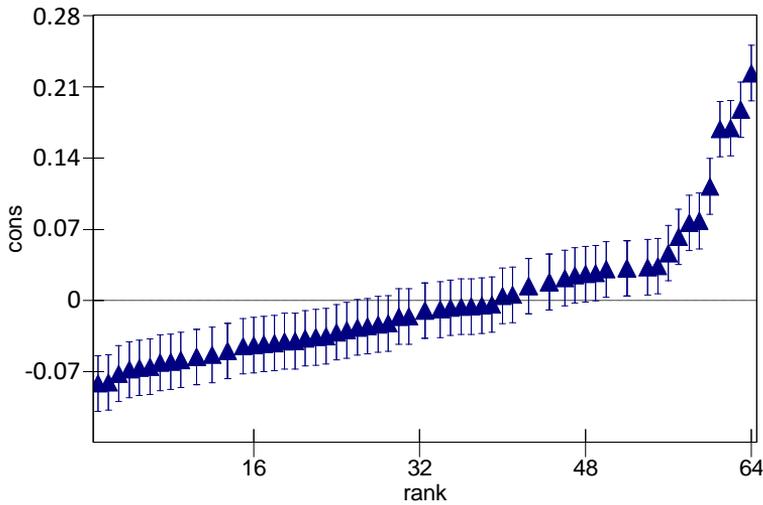
The measure of institutions (i.e. Institution (IN)) is higher level covariates (country-level), and thus  $\beta_1$  to  $\beta_4$  are the coefficients for the cross-level interaction terms.  $u_{0j}, u_{1j}$  and  $u_{2j}$  are the country-specific effects (random effects) on the varying intercept  $\beta_{0j}$ , and the varying slopes of  $\beta_{1j}$  and  $\beta_{2j}$  respectively.  $e_{ij}$  represents the residual from the level-1 equation (with group variance).

Integrating the link function and generalised linear model, it can obtain:

$$\begin{aligned} g(y_{ij}^*) &= \frac{1}{1 + e^{-(k_m - y_{ij}^*)}} - \frac{1}{1 + e^{-(k_{m-1} - y_{ij}^*)}} = \\ &= \frac{1}{1 + e^{-(k_m - \beta_{0j} - \beta_{1j}X_{ij1} - \dots - \beta_{1j}X_{ijk})}} - \frac{1}{1 + e^{-(k_{m-1} - \beta_{1j}X_{ij1} - \dots - \beta_{1j}X_{ijk})}} \\ \frac{\partial (g(y_{ij}^*))}{\partial X_1} &= \frac{\beta_{1j} e^{-(k_m - \beta_{0j} - \beta_{1j}X_{ij1} - \dots - \beta_{1j}X_{ijk})}}{(1 + e^{-(k_m - \beta_{0j} - \beta_{1j}X_{ij1} - \dots - \beta_{1j}X_{ijk})})^2} - \\ &\quad - \frac{\beta_{1j} e^{-(k_{m-1} - \beta_{0j} - \beta_{1j}X_{ij1} - \dots - \beta_{1j}X_{ijk})}}{(1 + e^{-(k_{m-1} - \beta_{0j} - \beta_{1j}X_{ij1} - \dots - \beta_{1j}X_{ijk})})^2} \end{aligned} \quad (3)$$

A precondition for running a hierarchical model is that significant between-group variance exists for the dependent variable (Hofmann, Griffin, & Gavin, 2000). Hence, this article conducts a Chi-square test with individual-level export as the dependent variable and country group as the predictor. This test implies significant between-group variance within the data, with  $\chi^2(252) = 3.406 \text{ E3}$  ( $p < 0.000$ ).

A plot of the null random intercept model is also generated in which the vertical axis represents the predicted intercept and the horizontal axis represents the rank of country effect. It will thus illustrate the differences between the countries in terms of the extent of export, with 95% confidence intervals.



**Figure 1. Heterogeneity across countries**

Source: own elaboration.

## RESULTS AND DISCUSSION

Table 1 in provides the means, standard deviations and pairwise correlation coefficients for the study variables. The correlations of Table 1 showed some variables to be highly correlated. Thus, it also conducted a diagnostic test of multicollinearity [examining the variance inflation factors (VIFs) of all variables in the analyses], and it found that it was not likely to be a problem in this data set.

In Table 2, Model 1 is an intercept-varying and a base model where control variables of age, gender, income, education attainment and industry controls are first entered. The intraclass correlation indicates that 18.6% of the total variance within the data resided between provincial a group, which suggests that the country-level variance is both non-trivial and highly significant. In the next step (Model 2), it tests a random coefficient model (intercept and slope as outcomes model), using level-1 variables as predictors. The analysis shows significant variance in both intercepts and slopes across provincial groups. The results also show that self-efficacy is positively and significantly related to the degree of export ( $p < 0.05$ ). Additionally, risk tolerance is found to have a significant positive relation with the probability of choosing higher export category. In particular, comparing with risk tolerant entrepreneurs, the odds ratio of risk-averse entrepreneurs choosing a higher category of export increases by a factor of 1.159. Thus, hypotheses that the entrepreneur's self-efficacy and risk tolerance are positively associated with the degree of export are supported, Model 3 enters formal institutional index as the moderator. A comparison of Model 2 and 3 shows that the provincial-level variance reduces from 0.752 to 0.738, indicating the inclusion of the cross-level interaction terms explains additional country-level variance in the degree of export by early-stage firms.

**Table 1. Correlation matrix**

Category	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Export(1)	1.59	0.81	1.000								
Gender(2)	1.51	0.50	-0.068**	1.000							
Age(3)	39.56	14.64	-0.015*	0.033**	1.000						
Income(4)	2.96	1.58	0.146**	-0.026**	-0.106**	1.000					
Education(5)	3.31	0.50	0.052**	0.043**	0.065**	-0.140	1.000				
Industry(6)	2.06	0.72	0.079**	-0.084**	-0.039**	0.264**	0.137**	1.000			
Self- -efficacy(7)	0.52	0.35	0.094**	-0.055**	0.015	0.067**	0.035**	0.078**	1.000		
Risk tolerance (8)	0.41	0.16	0.137**	-0.014	-0.035**	0.080**	0.035**	0.019*	0.021	1.000	
Institutional Index(9)	0.01	0.35	0.169**	-0.017*	0.010	0.117**	0.088**	0.084**	0.034**	0.204**	1.000

Note: \*\* p<0.01; \* p<0.05;

Source: own study.

**Table 2. Multilevel logistic regression analysis results**

Category		Model 1		Model 2		Model 3	
		Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
<b>Fixed effects</b>							
<b>Control variables</b>							
Age		-0.012***	(0.001)	-0.014***	(0.001)	-0.014***	(0.001)
Gender		-0.220***	(0.037)	-0.128***	(0.037)	-0.124**	(0.037)
Household income		0.223***	(0.027)	0.180***	(0.027)	0.180***	(0.027)
Education attainment		0.093***	(0.015)	0.061***	(0.015)	0.065***	(0.015)
Industry controls	Extractive industry						
	Transforming	0.306***	(0.009)	0.287***	(0.010)	0.287***	(0.010)
	Business service	0.319***	(0.005)	0.298***	(0.005)	0.298***	(0.005)
	Customer oriented	0.366***	(0.006)	0.343***	(0.006)	0.342***	(0.006)
<b>Individual-level predictors</b>							
Self-efficacy				1.103***	(0.047)	1.085***	(0.046)
Risk attitude				0.151***	(0.041)	0.148***	(0.041)
<b>Country-level predictors</b>							
Institutional Index						0.188	(0.339)
<b>Cross-level three-way interaction</b>							
Self-efficacy*Formal Institution						0.469***	(0.125)
Risk attitude*Formal Institution						0.313**	(0.115)
<b>Random effects and model fits</b>							
Residual country-level variance			0.752		0.752		0.738
Number of obs.			63,794		63,794		63,794
Number of countries			64		64		64
Log-likelihood			-14082.2		-13757.1		-13744.8
Akaike Information Criterion			28188.4		27542.3		27523.7

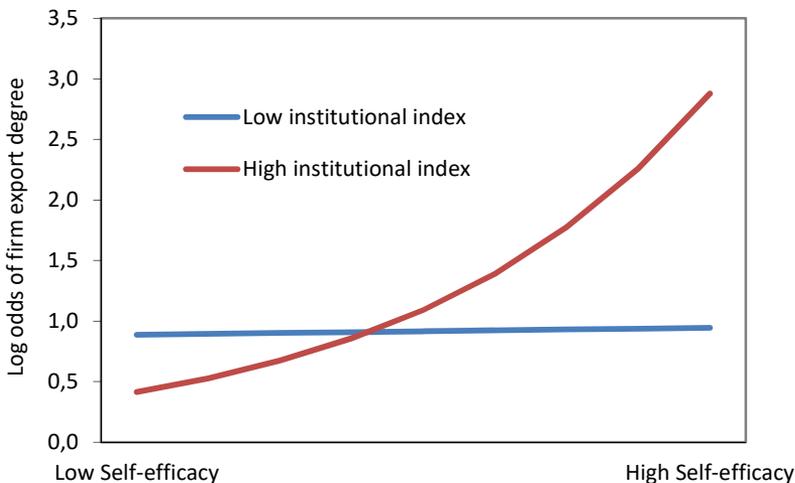
Note: \*\*\* p<0.001 ; \*\* p<0.01; \* p<0.05; + p<0.1

Source: own study.

The results find evidence to support the hypotheses that formal institutions moderate the relationship between self-efficacy and export and the relationship between risk-tolerance and export.

Looking at the control variables in all three models, it finds that gender is consistently a significant factor explaining the likelihood of one choosing higher category of export. More specifically, women are found to be only half as likely to adopt export as men. This is consistent with previous empirical findings (Reynolds, Carter, Gartner, Greene, & Cox, 2002). Household income and education attainment of the new venture have a significant positive relation with export degree. In particular, when the education attainment of entrepreneurs increases by one unit, the degree of export can increase by 9.7% ( $p < 0.01$ ) in Model 1, and 6.2% ( $p < 0.01$ ) in Model 2 in odds. Similarly, businesses with a higher degree of education can significantly increase the degree of export ( $p < 0.001$ ). In which industry the new business is trading also matters. Entrepreneurs in the transforming business and business service industries have much higher likelihood of export than those from the extractive industry (reference category).

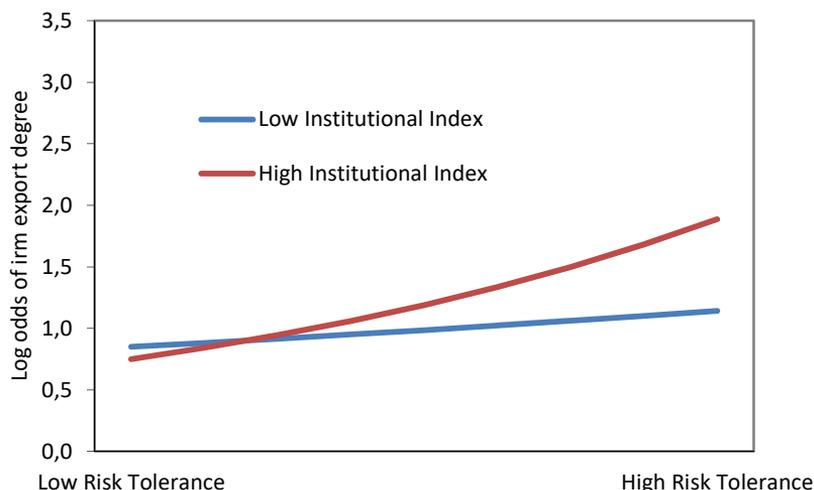
Figures 2 and 3 illustrate the two-way interactions between self-efficacy and risk-attitude in explaining the degree of export. These figures confirm the expectation.



**Figure 2. Interaction between self-efficacy and Institutional Index**

Source: own elaboration.

Drawing on entrepreneurial resource perspective and formal institutional theory, the results suggest that there is a positive relation between self-efficacy and export and that people who have the willingness to pursue decisions or courses of action associated with uncertainty regarding success or failure outcomes are more likely to export. In addition, research findings also confirm the positive moderating effect of formal institutions on entrepreneurial resource aspects, suggesting that a stronger institutional environment strengthens the positive impact of motivational factors on the degree of export.



**Figure 3. Interaction between risk tolerance and Institutional Index**

Source: own elaboration.

## CONCLUSIONS

This study adopts a more comprehensive approach in studying export by integrating entrepreneurial resource perspective with the institutional dimensions to consider the direct and indirect effects of motivational factors on export. The findings of the study have implications in particular for policy-makers who are interested in encouraging early export by influencing institutional dimensions. Policymakers have largely concentrated on institutions to increase entrepreneurial opportunities, but institutions may not be sufficient to stimulate international entrepreneurship (Stephan & Uhlaner, 2010). Based on a well-justified aggregated institutional index, it proves the importance of formal institutions to formulate policies and carry them out in the process of reaping the benefits of institutions for the development of export level. The identified moderating effect of institutional system suggests that along with the motivational factors emphasised by the entrepreneurial resource, it is important not to underestimate the role of the institutional system in shaping propensity and intensity of export activity.

The findings of this study should be considered along with its limitations. While the measure of export captures exported sales, they are limited in offering much insight into the other activities that comprise export, and how informal institutions would influence the extent of export. For example, future research might examine the extent of export in terms of foreign production, international sourcing, and geographical dispersion (Sanders & Carpenter, 1998). Moreover, this study is cross-sectional in nature. A longitudinal study is critically needed to fully capture the dynamic moderating effect of institutions. Specifically, different countries may require different institutional structures at different points in time (Holmberg, Rothstein, & Nasiritousi, 2009). The complexities of institutional arrangements across different stages of national development may vary differently. This fundamentally important question cannot be looked at in this study but deserves further investigation in the future.

## REFERENCES

- Adserà, A., Boix, C., & Payne, M. (2003). Are You Being Served? Political Accountability and Quality of Government. *The Journal of Law, Economics and Organization*, 19(2), 445-490. <https://doi.org/10.1093/jleo/ewg017>
- Ahlstrom, D., & Bruton, G. (2001). Learning from successful local private firms in China: establishing legitimacy. *The Academy of Management Executive*, 15(4), 72-83.
- Barkema, H.G., Bell, J.H.J., & Pennings, J.M. (1996). Foreign entry, cultural barriers, and learning. *Strategic Management Journal*, 17(2), 151-166. [https://doi.org/10.1002/\(SICI\)1097-0266\(199602\)17:2<151::AID-SMJ799>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199602)17:2<151::AID-SMJ799>3.0.CO;2-Z)
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- Bandura, A. (1977). Self-Efficacy: Toward a Unifying Theory of Behavioral Change. *Psychological Review*, 84(2), 191-215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bandura, A. (1982). The Assessment and Predictive Generality of Self-Percepts of Efficacy. *Journal of Behavior Therapy and Experimental Psychiatry*, 13(3), 195-199. [https://doi.org/10.1016/0005-7916\(82\)90004-0](https://doi.org/10.1016/0005-7916(82)90004-0)
- Bandura, A. (1986). *Social foundations of thought & action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1989). Human Agency in Social Cognitive Theory. *American Psychologist*, 44(9), 1175-1184. <https://doi.org/10.1037/0003-066X.44.9.1175>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Birney, R.C., Burdick, H., & Teevan, R.C. (1999). *Fear of Failure*. New York: Van Nostr &-Reinhold Company.
- Bowen, H.P., & De Clercq, D. (2008). Institutional context and the allocation of entrepreneurial effort. *Journal of International Business Studies*, 39(4), 747-767.
- Buckley, P.J., Clegg, J., Cross, A., Zheng, P., Voss, H., & Liu, X. (2007). The determinants of Chinese outward foreign direct investment. *Journal of International Business Studies*, 39(4), 499-518.
- Cacciotti, G., Hayton, J.C., Mitchell, J.R., & Giazitzoglu, A. (2016). A reconceptualization of fear of failure in entrepreneurship. *Journal of Business Venturing*, 31(3), 302-325. <https://doi.org/10.1016/j.jbusvent.2016.02.002>
- Chrupała-Pniak, M., Grabowski, D., & Sulimowska-Formowicz, M. (2017). Trust in Effective International Business Cooperation: Mediating Effect of Work Engagement. *Entrepreneurial Business and Economics Review*, 5(2), 27-50. <https://doi.org/10.15678/EBER.2017.050202>
- Chen, C.C., Greene, P.G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?. *Journal of Business Venturing*, 13(4), 295-316.
- Etayankara, M., & Saurav, P. (2016). Informal institutions and international entrepreneurship. *International Business Review*, 19(1), 85-101. <https://doi.org/10.1016/j.ibusrev.2016.07.006>
- De Carolis, D.M., & Saporito, P. (2006). Social capital, cognition, and entrepreneurial opportunities: a theoretical framework. *Entrepreneurship Theory and Practice*, 30(1), 41-56. <https://doi.org/10.1111/j.1540-6520.2006.00109.x>
- Dunning, J.H., & Lundan, S.M. (2008). *Multinational Enterprises and the Global Economy*. Cornwall: Edward Elgar Publishing.
- Fama, E.F., & French, K.R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33(1), 3-56. [https://doi.org/10.1016/0304-405X\(93\)90023-5](https://doi.org/10.1016/0304-405X(93)90023-5)

- Fukuyama, F. (2014). *Political Order and Political Decay: From the Industrial Revolution to the Globalization of Democracy*. London: Profile books Ltd.
- Gaur, A.S., Kumar, V., & Singh, D. (2014). Institutions, resources, and export of emerging economy firms. *Journal of World Business*, 49(1), 12-20. <https://doi.org/10.1016/j.jwb.2013.04.002>
- Głodowska, A. (2017). Business Environment & Economic Growth in the European Union Countries: What Can Be Explained for the Convergence?. *Entrepreneurial Business and Economics Review*, 5(4), 189-204. <https://doi.org/10.15678/EBER.2017.050409>
- Głodowska, A., & Wach, K. (2017). Editorial: International Entrepreneurship: New Perspective in IB Research. *Entrepreneurial Business and Economics Review*, 5(3), 7-8. <https://doi.org/10.15678/EBER>
- Hayton, J.C., & Cacciotti, G. (2013). Is there an entrepreneurial culture? A review of empirical research. *Entrepreneurship and Regional Development*, 25(9), 708-731. <https://doi.org/10.1080/08985626.2013.862962>
- Heckman, J.J. (1979). Sample selection bias as a specification error. *Econometrica*, 47(1), 153-161. <https://doi.org/10.3386/w0172>
- Hofmann, D.A., Griffin, M.A., & Gavin, M.B. (2000). The application of hierarchical linear modeling to organizational research. In K.J. Klein & S.W.J. Kozlowski (Eds.), *Multileveltheory, research, and methods in organizations*. San Francisco: Jossey-Bass.
- Holmberg, S., Rothstein, B., & Nasiritousi, N. (2009). Quality of Government: What You Get. *Annual Review of Political Science*, 12(1), 135-162. <https://doi.org/10.1146/annurev-polisci-100608-104510>
- Hoskisson, R.E., Eden, L., Lau, C.M., & Wright, M. (2000). Strategy in emerging economies. *Academy of Management Journal*, 43(3), 249-267. <https://doi.org/10.2307/1556394>
- Jackson, D.N. (1994). *Jackson Personality Inventory: Revised manual*. Port Huron, MI: Sigma Assessment Systems.
- Johanson, J., & Wiedersheim-Paul, F. (1975). The export of the firm – Four Swedish cases. *Journal of Management Studies*, 12(3), 305-322. <https://doi.org/10.1111/j.1467-6486.1975.tb00514.x>
- Kaufmann, D., Kray, A., & Zoido-Lobotan, P. (1999). *Governance matters* (Policy Research Working Paper no. 2196). Washington, DC: World Bank Development Research Group.
- Kleinfeld, R. (2006). Competing Definitions of the Rule of Law. In T. Carothers (Ed.), *Promoting the Rule of Law Abroad: In Search of Knowledge* (pp. 31-74). Washington, DC: Carnegie Endowment.
- Kowalik, I., Danik, L., Král, P., & Řezanková, H. (2017). Antecedents of Accelerated Internationalisation of Polish and Czech Small and Medium-Sized Enterprises. *Entrepreneurial Business and Economics Review*, 5(3), 31-48. <https://doi.org/10.15678/EBER.2017.050302>
- Kyriazidou, E. (1997). Estimation of a panel data sample selection model. *Econometrica*, 65(6), 1335-1364.
- Liu, C. (2017). International Competitiveness and the Fourth Industrial Revolution. *Entrepreneurial Business and Economics Review*, 5(4), 111-133. <https://doi.org/10.15678/EBER.2017.050405>
- Liu, Y., Li, Y., & Xue, J. (2011). Ownership: Strategic orientation and export in emerging markets. *Journal of World Business*, 46(3), 381-93.
- Luo, Y., Xue, Q., & Han, B. (2010). How emerging market governments promote outward FDI: Experience from China. *Journal of World Business*, 45(1), 68-79.
- Martin, K.D., Cullen, J.B., Johnson, J.L., & Praveen Parboteeah, K. (2007). Deciding to Bribe: A Cross-Level Analysis of Firm and Home Country Influences on Bribery Activity. *Academy of Management Journal*, 50(6), 1401-1422.
- O'Farrell, P.N., Wood, P.A., & Zheng, J. (1998). Regional influences on foreign market development by business service companies: elements of a strategic context explanation. *Regional Studies*, 32, 31-48. <https://doi.org/10.1080/00343409850123602>

- Peng, M.W., Wang, D.Y.L., & Jiang, Y. (2008). An institution based view of international business strategy: A focus on emerging economies. *Journal of International Business Studies*, 39(5), 920-936.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- Porter, M.E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, NewYork: Free Press.
- Reynolds, P., Carter, N., Gartner, W., Greene, P., & Cox, L. (2002). *The entrepreneur next door characteristics of individuals starting companies in America*, Kansas City, MO: Ewing Marion Kauffman Foundation.
- Rialp, A., Rialp, J., & Knight, G.A. (2005). The phenomenon of early internationalizing firms: What do we know after a decade (1993-2003) of scientific inquiry?. *International Business Review*, 14(2), 147-166.
- Rothstein, B., & Teorell, J. (2008). What is quality of government? A theory of impartial government institutions. Governance: An International Journal of Policy. *Administration and Institutions*, 21(2), 165-190. <https://doi.org/10.1111/j.1468-0491.2008.00391.x>
- Satish, K., & Thompson, S.H. Teo (2012). Moderating Effects of Governance on Information Infrastructure and E-Government Development. *Journal of the American society for information science & technology*, 63(10), 1929-1946. <https://doi.org/10.1002/asi.22660>
- Scott, W.R. (1995). *Institutions & organizations. Foundations for organizational science*. London: SAGE Publications.
- Sigfusson, T., & Harris, S. (2012). Domestic market context and international entrepreneurs' relationship portfolios. *International Business Review*, 22(1), 243-258. <https://doi.org/10.1016/j.ibusrev.2012.04.008>
- Meso, P., Datta, P., & Mbarika, V. (2006). Moderating information and communication technologies' influences on socioeconomic development with good governance: A study of the developing countries. *Journal of the American Society for Information Science and Technology*, 57(2), 186-197. <https://doi.org/10.1002/asi.20263>
- Nadkarni, S., & Barr, P.S. (2008). Environmental context, managerial cognition, and strategic action: an integrated view. *Strategic Management Journal*, 29(13), 1395-1427. <https://doi.org/10.1002/smj.717>
- Naffziger, D.H. (1994). A proposed model of entrepreneurial motivation. *Entrepreneurship Theory and Practice*, 29-41. <https://doi.org/10.1177/104225879401800303>
- North, D.C. (1990). *Institutions, Institutional Change & Economic Performance*. Cambridge University Press, Cambridge, MA.
- Thai, M., & Turkina, E. (2014). Macro-level determinants of formal entrepreneurship versus informal entrepreneurship. *Journal of Business Venturing*, 29(4), 490-510.
- Urbano, D., Alvarez, C., & Turró, A. (2013). Organisational resources and intrapreneurial activities: an international study. *Management Decision*, 51(4), 854-870. <https://doi.org/10.1108/00251741311326617>
- Westhead, P. (1995). Exporting and non-exporting small firms in Great Britain. A matched pairs comparison. *International Journal of Entrepreneurial Behavior and Research*, 1(2), 6-36. <https://doi.org/10.1108/13552559510090604>
- Wiseman, R.M., & Catanach, C. (1997). A longitudinal disaggregation of operational risk under changing regulations: Evidence from the savings and loan industry. *Academy of Management Journal*, 40(4), 799-830.
- Wiseman, R.M., & Gomez-Mejia, L.R. (1998). A behavioral agency model of managerial risk taking. *Academy of Management Review*, 23(1), 133-153.

- Wooldridge, J. (1995). Selection corrections for panel data models under conditional mean independence assumptions. *Journal of Econometrics*, 68(1), 115-132.
- Zahra, S.A., Korri, J.S., & Yu, J. (2005). Cognition and international entrepreneurship: Implications for research on international opportunity recognition and exploitation. *International Business Review*, 14(2), 129-146. <https://doi.org/10.1016/j.ibusrev.2004.04.005>
- Zander, I., McDougall-Covin, P., & Rose, E.L. (2015). Born globals and international business: Evolution of a field of research. *Journal of International Business Studies*, 46(1), 27-35. <https://doi.org/10.1057/jibs.2014.60>

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#### Acknowledgements and Financial Disclosure

The author would like to thank the anonymous referees for their useful comments, which allowed to increase the value of this article.

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Published by the Centre for Strategic and International Entrepreneurship – Krakow, Poland



Ministry of Science  
and Higher Education  
Republic of Poland

The copyediting and proofreading of articles in English is financed in the framework of contract No. 845/P-DUN/2018 by the Ministry of Science and Higher Education of the Republic of Poland committed to activities aimed at science promotion.

