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The Influence of Organizational Ambidexterity on SME Speed of Internationalization

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ABSTRACT

Small and medium enterprises (SMEs) require a combination of organizational and individual skills to grow more rapidly in international markets. The question is whether there is an ideal combination to compete in the present (exploitation orientation) or to prepare to compete in the future (exploration orientation), and whether managerial cognition plays a role on determining international growth. The analysis of Portuguese manufacturing SMEs suggests that the manager's cognitive systems do not have an overall influence on the growth of foreign sales to total sales (FSTS), but the two cognitive systems (experiential and analytic) have a different influence on international exploitation and exploration. International exploration and exploitation mediate the relationship between the latter variables. This study contributes to a better understanding of the role that organizational ambidexterity plays on the SMEs' speed of internationalization and how the manager's cognitive systems influence this organizational orientation.

KEYWORDS

Cognitive Systems, Exploitation, Exploration, Medium-Sized Firms, Organizational Ambidexterity, Small, Speed of Internationalization

INTRODUCTION

The topic of the speed of internationalization occupies a central position as a measure of the international success of businesses (Acedo & Jones, 2007; Casillas & Acedo, 2013), which is considered the most relevant time-based dimension in the study of the firm's internationalization (Prashantham & Young, 2011).

The literature on the concept and measure of speed of internationalization has become vast and heterogeneous, and it includes various perspectives. Despite conceptual (Casillas & Acedo, 2013) and empirical studies (Pla-Barber & Escribá-Esteve, 2006) have suggested that speed of internationalization is a multi-dimensional concept (Casillas & Acedo, 2013; Zucchella et al., 2007), the core of the definition indicates that *speed of international expansion* captures how fast a firm

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spreads its sales activities to several foreign markets (Casillas & Acedo, 2013; Hilmersson & Johanson, 2016; Hilmersson et al., 2017).

Additionally, ventures become international increasingly early, which requires firms to grow significantly quickly in short time period, a type of born to grow requirement, in order to survive and obtain the return needed to compensate the higher risk that such decision entails (Puig et al., 2018; Zucchella et al., 2007).

When a firm operates in an international market, it faces a more competitive environment. Managers should then address the following question: how many resources should the firm allocate to exploration and exploitation of international activities? International Business-IB theories characterize the internationalization of firms as the ability to exploit competitive advantages, and the desire to explore resources that strengthen corporate global competitiveness and long-term performance (Hsu et al., 2013). Thus, while some firms tend to search for new international business opportunities (international exploration orientation), others tend to exploit existing products, services, assets or capabilities in foreign markets already identified as the key target (international exploitation orientation). Furthermore, a recent research stream claim that such decisions strongly depend on how managers use their two cognitive systems (Maitland & Sammartino, 2015), namely cognitive system-C (Sys-C, analytical, conscious reasoning) and system-X (Sys-X, intuitive, effortless, automatic and experiential-based reasoning).

Thus, the aim of this study is to shed light on which organizational orientation helps SMEs to grow faster internationally, and the role played by the manager's cognitive systems. Our results have relevant implications for theory and practice. First, whether international organizational ambidexterity –i.e. simultaneously exploring while exploiting– can reach international growth at higher pace. Second, whether there is an optimal combination of exploration and exploitation activities to allow quicker international grow. Third, whether the combination of experiential knowledge (Sys-X) and analysis plays a role to explain the pace of international growth and organizational orientation.

The empirical analysis is carried out on a sample of 93 Portuguese SMEs. Portugal is a peripheral region from EU and a small open economy in which SMEs should become international, at some moment, in order to survive. The Portuguese industrial system is predominantly dominated by SMEs, representing a relevant setting for this research. Our sample includes firms from traditional manufacturing sectors: footwear, textile, clothing and furniture.

In the remaining of the paper, we first review the literature on the organizational ambidexterity - speed of internationalization link, with a special focus on reflecting whether and how much the manager's cognitive systems influence this relation. Hypotheses are then developed on the cognitive systems effects over the levels of international exploration versus exploitation and on the links of the latter orientations with international sales growth. In the following section, we describe the sample, data and measurements used for the empirical analysis by means of partial least squares. We then present and discuss the results and, finally, we introduce our conclusions and their implications for both researchers and practitioners.

LITERATURE REVIEW

The increasing level of rivalry in international markets requires firms to be proactive (Martini, et al., 2013), driving the interest in the study of the different competences that the organization should have for the creation of new businesses (Kickul, et al., 2009).

The term 'organizational ambidexterity' was the proposal of March (1991), which portrays the phenomenon as the ability of firms to share attention and resources that affects how managers approach markets (He & Wong, 2004; March, 1991), which includes domestic and international markets. The term "organizational ambidexterity" is related to the businesses ability to simultaneously pursue learning, innovation, stability and transformation in organizational adaptation and strategic

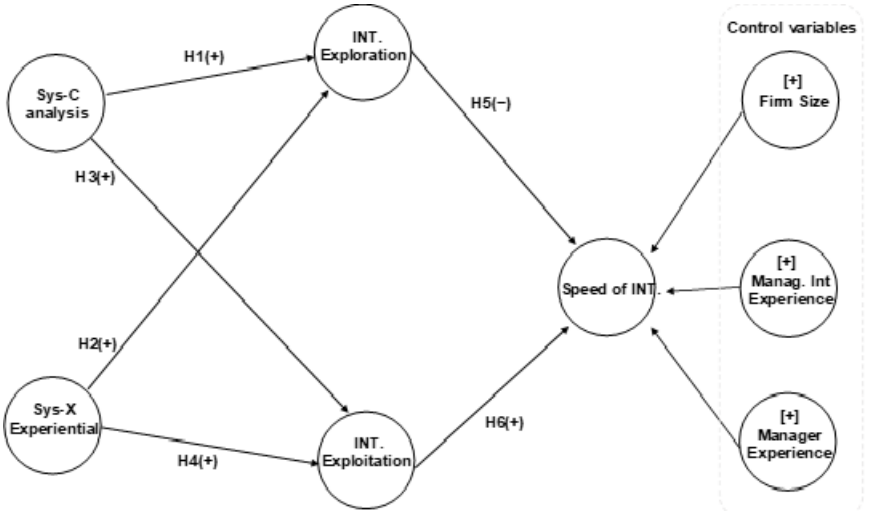
processes and, flexibility in organizational structure (Raisch & Birkinshaw, 2008). Organizational ambidexterity is, thus, the ability of an organization to be simultaneously efficient in its management of today's business demands–*exploitation orientation*– and adaptive to changes in the environment to compete in the future –*exploration orientation* – (Duncan & Weiss, 1979). It is common to associate exploitation with the existence of current resources and capabilities and the exploration to the search and discovery of new possibilities (Stephan & Kerber, 2010). We can, then, conclude that exploitation activities seek to increase the efficiency and utilization of current resources and capabilities in the short term; exploration activities allow the discovery of new opportunities outside the organization to be successful in the long term (Lubatkin et al., 2006), including opportunities in international markets (Prange & Verdier, 2011). The resources allocated and split into both orientations should be balanced in order to not compromise short and long-term viabilities but firms, faced with this dilemma, should invest in both simultaneously if they want to sustain the business over time (Dasí et al., 2015; Hsu et al., 2013; Voss & Voss, 2013).

This ambidexterity, as the ability to compete today while preparing to compete tomorrow, requires an intensive use of the manager's cognitive systems. As the empirical research on IB points out, it is necessary to incorporate managers' decision styles and cognitive processes in the way companies act (Maitland & Sammartino, 2015), since resource allocation is up to the entrepreneur-manager (Kickul et al., 2009). This reveals the influence that the individual has on decisions made by companies, thus leading to business the way they think, act, learn, understand, and operate the company as a segment of the manager-entrepreneur (Kickul et al., 2009).

The cognitive traits of individuals explain the recognition of opportunities and the selection of the way by which they process business information (Acedo & Jones, 2007). This process involves the interaction of two cognitive systems - System -X or experiential and System-C or rational (Kahneman & Frederick, 2002). However, the literature shows that there is a third type of management style - integrated, which uses both the analytical and experiential decision according to the context (Agor, 1984). In order to explain the differences in relation to exploratory and exploitative activities in firms, de Visser & Faems (2015) argue that, individuals with a rational cognitive system (System-C) tend to opt for organizational exploitation and intuitive individuals (System-X) are more likely to choose organizational exploration.

Based on mental models to assess the attractiveness and possibility of achieving opportunities, cognitive models and images process current information by projecting it into future situations (Wood & Mckelvie, 2015). According to Haaja (2019), the international opportunity recognition refers to an iterative process that involves aspects of research/discovery, identification, evaluation and creation of opportunities. This author proposes three groups of factors that constitute the entrepreneur's mental images for specific foreign markets: (1) experiences of the market, (2) current strategies and resources, and (3) attractiveness of the market. The first group is a relevant element of internationalization theory since experiential knowledge is crucial for the understanding of the firm's international behaviour (Figueira-de-Lemos et al., 2011; Johanson & Vahlne, 1977). This is a feature of the cognitive system-X, which strongly relies on learning-by-experience in valid environments (Kahneman, 2003). In addition to the cognitive dimension, the external international environment influences international opportunity recognition (Peiris et al., 2012, 2015), either by the ongoing expansive or exploratory activities (Hohenthal et al., 2003), by dynamic feedback (Chandra et al., 2012) or, simply, by the external stimuli that lead to the internationalization of businesses (Santos-Álvarez & García-Merino, 2010). This reveals a subjective process shaped by the environmental characteristics and inputs that the entrepreneur interprets by using both cognitive systems. Thus, to called 'mental representations' (Zahra, 2005), 'cognitive frames' (Andresen et al., 2014) or the 'prototypes' (Chandra et al., 2015) are the result of the environment and the experiences of entrepreneurs.

Figure 1. Research model



RESEACH MODEL AND HYPOTHESES

The mediating role of international organizational ambidexterity in contributing to the speed of internationalization in SMEs is central to our study (see Figure 1).

'Exploration' and 'Exploitation' are two major organizational orientations that affect learning processes at different levels (Levitt & March, 1988). There are several authors who argue that the long-term success of firms requires an 'ambidexterity' orientation (Raisch & Birkinshaw, 2008; Voss & Voss, 2013). Ambidextrous firms consider exploration and exploitation activities (Raisch & Birkinshaw, 2008) rather than presenting them as two distinct but complementary perspectives (Voss & Voss, 2013).

In an international environment, IB theories characterize the internationalization of firms as the ability to exploit competitive advantages, and the desire to explore resources that strengthen corporate global competitiveness and long-term performance (Hsu et al., 2013). Therefore, the more ambitious the organization is, the more capacity it will have to exploit the current resources and explore new international markets successfully, thus helping to accelerate the internationalization process.

The organizational ambidexterity requires the use of both cognitive reasoning (Sys-C and Sys-X). Exploration and exploitation require the use of business intuition based on experiential knowledge, a holistic perspective and creativity, all of which is related to the use of Sys-X. It also needs the use of detailed analysis to check for potential inconsistencies stemming from Sys-X, a conscious reflection based on facts, which is related to the use of Sys-C. In fact, experiential managers are characterized by greater creativity and capacity to solve problems based on experiential knowledge (González-Loureiro & Vlačić, 2016). As such, they will be able to detect opportunities more readily than rational managers will, once the analytic cognition (Sys-C) is more conservative and risk–averse, needing a detailed and conscious analysis to reach a decision.

Thus, individuals that tend to use their intuitive reasoning tend to learn from experience, using this automatically and emotionally acquired knowledge in new situations. While the individuals who tend to be more rational acquire information deliberately, operating on a conscious, intentional and analytical level, needing to resort to careful analysis when they want to develop an idea (Dane & Pratt, 2007; Kickul et al., 2009).

The international exploration is related to scanning the international environment in the search for new international business opportunities. It may take the form of new international markets or

developing new products for international markets, while international exploitation activities relate to seizing on extant products and markets, adapting existing technologies and focusing on current customers by digging deeper with what the SME already has (Lubatkin et al., 2006; Prange & Verdier, 2011).

On the one hand, we know from psychology research that cognition is incomplete without the intervention of both cognitive systems (Sys-C and Sys-X). On the other hand, from IB research we know that experiential knowledge is key for the explanation of internationalization. Experiential knowledge is part of Sys-X (based on the experience, the feelings). Thus, a higher use of Sys-X should lead to increased levels of international exploration activities. Scanning the international environment in the search for new international opportunities is part of the international exploration.

Hypothesis One: A higher use of Cognitive System-C will have a positive impact on higher levels of international exploration.

Hypothesis Two: A higher use of Cognitive System-X will have a positive impact on higher levels of international exploration.

Similar to the previous arguments, international exploitation means that activities are devoted to an intensive use of current products in current markets (Lubatkin et al., 2006; Prange & Verdier, 2011). It may take the form of more depth in the current international markets in terms of increasing the presence in foreign markets where the SME is already present. This requires both analysis and intuitive reasoning, the latter based on experiential knowledge, the former based on the analytical skills of data. Hence, to exploit current assets, products or markets, the manager should use intensively both cognitive systems: the intuition (based on experience) of what type of actions should be implemented, and the analysis of data to reach a final solution.

Hypothesis Three: A higher use of Cognitive System-C will have a positive impact on higher levels of international exploitation.

Hypothesis Four: A higher use of Cognitive System-X will have a positive impact on higher levels of international exploitation.

Although some studies have found a positive impact of organizational ambidexterity on SME's performance (e.g. Ebben & Johnson, 2005; Lubatkin et al., 2006), it must be mentioned that there is a trade-off relation between exploration and exploitation orientations. Since the constrained availability of resources is a characteristic of SMEs, they should choose how to split the total amount of resources to each orientation, although the overall idea is to maximise both. A usual metric of the degree of internationalization includes the ratio foreign sales to total sales-FSTS. Since its growth is a short-term measure of increased success of extant products in extant foreign markets, it can be predicted that an international orientation to exploration will have a negative impact on short-term FSTS growth. The main argument is that returns associated with exploration are more variable and distant in time than returns associated with exploitation (Dasí et al., 2015; He & Wong, 2004; March, 1991; Raisch & Birkinshaw, 2008). Thus, an international exploitation orientation will have a positive impact on the growth of FSTS since these activities try to exploit extant products in current foreign markets by means of increased levels of efficiency.

Hypothesis Five: A higher level of international exploration will have a negative impact on the growth of FSTS.

Hypothesis Six: A higher level of international exploitation will have a positive impact on the growth of FSTS.

METHODS

Sample and Data Collection

To test our hypotheses, we used a quantitative survey method. Our sample included Portuguese SMEs, created between 2005 and 2017, that had at least one year of international sales. As an exploratory study, we focused on traditional manufacturing sectors, footwear, textile, clothing and furniture (NACE codes 13, 14, 15 and 31), because these sectors are characterized by a high number of SMEs with a higher internationalization orientation and high-quality product range.

SMEs, in this study, were defined as firms with less than 250 employees and annual sales below EUR 50 million or the annual balance below EUR 43 million, according to the EU recommendation 2003/36. A sampling of 795 SMEs with sales from international markets was gathered from the SABI (Iberian Balance Analysis System) database that contains credible and current quantitative information from Portuguese companies.

In addition to the quantitative data that was available in a statistical database, we sent a questionnaire to the selected SMEs' management team. The team consider the CEOs, export managers, area sales managers, or those who held similar positions, which ensured that respondents are knowledgeable about the firm's operations in the international markets. Managers at these 795 SMEs were initially contacted via email (which included an individual link to the online questionnaire) and later via telephone, to reinforce request for the participation in the study, conducted between April and December 2018. Although we used several methods to improve the response rates (e.g, the participants were informed that they would receive a summary report of the study as an encouragement), we received 93 (11.7% response rate). Most companies did not participate in the survey due to several reasons. Some were unreachable after multiple attempts; others declined to complete the questionnaire due to policies of not participating in surveys, or lack of time to participate.

Measurements

The key variables are growth of foreign sales-to-total sales (target variable), cognitive systems and international organizational ambidexterity (explanatory variables), and firm size, managers experience in the industry and in international markets as control variables. The operationalization of these variables is next described.

According to several contributions from the literature, the speed of internationalization is based on the ratio of foreign sales to total sales-FSTS (Autio et al., 2000; Jin et al., 2017; Zhou et al., 2010), which is our target variable. "Foreign sales", in this study, are defined as sales on international markets, regardless the mode of entry, i.e. export sales or sales from foreign subsidiaries. Internationalization speed is then proxied with the change from the past FSTS (relative the 2017 year) and the expected FSTS (based the mean the years 2018, 2019 and 2020), translated into the following formula: Growth = (Expected FSTS (2018-2020) – Past FSTS (2017)) /Past FSTS (2017). The larger the growth the FSTS changes, the higher the speed of internationalization. Data for the growth FSTS measure were obtained from the survey questionnaire by asking the respondents the FSTS for the periods indicated.

The *Cognitive Systems* was operationalized through the scale *Situation-Specific Thinking Style* (SSTS) of Novak & Hoffman (2009), in which respondents assess how the team responsible for internationalization activities tend to use their cognitive systems when making international decisions. The STSS scale measures the use of cognitive systems with 10 items for the experiential system (System X - intuition) - and 10 for the rational system (System C - analysis). It is a 5-point Likert scale ranging from 1 (I disagree at all) to 5 (I agree entirely). To measure the *International Organizational Ambidexterity (IOA)* we adopted the Lubatkin et al. (2006) scale, in which respondents evaluate the company's IOA. It considers 6 items for each explorative and exploitative orientation through a 5-point Likert scale ranging from 1 (disagree at all) to 5 (fully agree). This scale is explicitly referred to the orientation of companies in the international markets.

The firm size was measured according to the EU recommendation 2003/361, with a typology of micro, small or medium-sized firms. The international experience of the respondents was obtained by asking directly how many years they have participated in international activities (e.g. participation / representation in international events such as fairs, trade shows, carrying out exploration trips to international markets or other international activities). Finally, the managers' experience in the industry was also obtained by asking directly for how long they have performed these duties in this industry (number of years).

The share of sectors was balanced in the usable sample (footwear -18.3%; textile -21.5%; clothing -33.3% and furniture -26.9%). The companies are mostly small and the international experience of their managers is, on average, 9.8 years and the experience in industry is 14.8 years on average.

RESULTS

Measurement Validity and Reliability

We used a latent model with SMARTPLS v3.2.8 (Ringle et al., 2015). We used structural equation modelling by partial least squares (SEM-PLS) since the goal was to maximize the explanation of the variance (R2) for the growth in FSTS in a latent model. This procedure is more robust than a variance-covariance based model for small to medium sample sizes (Chin, 1998). Another justification for this choice is the lack of robust empirical papers exploring these relationships.

Our latent variables were reflective measurement scales, i.e. the indicators were highly correlated and interchangeable (Hair et al., 2013), which were examined for reliability and validity (Hair et al., 2012).

Exploratory Factor Analysis

First, we included all the items in the SEM-PLS and retained the items with factor loadings above 0.7 (Field, 2009). We performed this in SMARTPLS by using the factor weighing scheme under the PLS algorithm. After that, we checked the data adequacy, evaluated the reflective outer model and the inner model by performing a studentized bootstrap algorithm of 5000 resamples to obtain t-values for estimates.

Data Adequacy

A first concern relates to the sample size relative to the evaluated relationships. The widely-used rule of thumb (Chin, 1998) suggests that the overall sample size should be 10 times the largest of: (1) the block with the largest number of indicators or (2) the dependent variable with the largest number of independent variables impacting it. In our model, (1) is equal to 4 (Sys-X intuition), and (2) is equal to 7 (the number of arrows arriving at Growth-FSTS). Therefore, the minimum sample size should be 70 and our sample contains 93 cases, so data adequacy is met.

Reflective Outer Model Evaluation

The rule to retain reflective indicators is based on outer loadings (Hair et al., 2013). A bootstrap over 5,000 resamples was conducted with no sign changes in the resampling - the most conservative method. We used a one-tailed test at 0.05 significance level and retained outer loadings above 0.6 (Hair et al., 2013). All the constructs exceeded the minimum threshold for CR=0.70 for discriminant validity (Bagozzi & Yi, 1988) and 0.5 for AVE as a measure of convergent validity (see Table 1). The square root of each AVE should be greater than the correlations between the latent variables according to (Fornell & Larcker, 1981), and the absolute hetero-trait mono-trait ratio (HTMT) (Henseler et al., 2016). This indicates that discriminant validity has been established between all the pairs of constructs.

Table 1. Descriptive statistics and correlation matrix

Latent Constructs	Mean	SD	Quality Criteria			Latent Variable Correlations Matrix						
			CR	CA	AVE	1	2	3	4	5	6	7
1. Exploitation	4.21	0.63	0.92	0.87	0.80	*0.89*						
2. Exploration	3.96	0.64	0.87	0.78	0.70	0.72	*0.83*					
3. Firm Size	2.05	0.67	n.a.	n.a.	n.a.	0.31	0.45	*n.a.*				
4. Manager Int Experience	9.87	9.43	n.a.	n.a.	n.a.	0.27	0.26	0.06	*n.a.*			
5. Manager experience	28.63	10.24	0.94	0.88	0.89	0.13	0.07	0.02	0.59	*0.93*		
6. Sys-C-analysis	4.09	0.44	0.84	0.75	0.57	0.56	0.43	0.05	0.04	0.05	*0.75*	
7. Sys-X-intuition	3.46	0.71	0.92	0.89	0.74	0.29	0.23	0.07	0.04	0.13	0.27	*0.86*
8. Growth FSTS	0.51	1.41	n.a.	n.a.	n.a.	0.10	0.38	0.27	0.09	0.17	0.18	0.06

(*) Mean, the average score for the items retained in this construct; SD=standard deviation; CR=composite reliability; CA=Cronbach's Alpha; AVE=average variance extracted; The italic numbers on the diagonal are the square root of the AVE. Off-diagonal values are correlations among constructs/variables; n.a.=not applicable (single-item)

Inner Model Evaluation

Although PLS-SEM lacks a unique global scalar function to be optimized, Hair et al. (2012) suggests the central criterion of R2, effect size (f2), and path coefficients with their respective t-values for models with reflective indicators. The overall approximate model fits (SRMR) was below the suggested threshold of 95% and 99% bootstrap quantile (Henseler et al., 2016). The adjusted R2 of the target construct decreases marginally from 0.213 to 0.149 when adjusted for the number of variables in the model (see table 2).

DISCUSSION

Our results support some of the hypotheses of this study (Table 2 and table 3). Cognitive systems have no overall influence on the growth of FSTS, neither directly nor indirectly. However, the use of both cognitive systems increases the activities devoted to exploitation (Sys-C: 0.42; Sys-X: 0.20), while only Sys-C increases the exploration orientation (Sys-C: 0.29). So, H1 is supported, which stated that a higher use of Cognitive System-C has a positive impact on higher levels of international exploration. However, we found no support for H2, which proposed that a higher use of Cognitive System-X impacts positively on higher levels of international exploration. H3 and H4 are both supported, which suggested that a higher use of Cognitive System-C and System-X has a positive impact on higher levels of international exploitation. These results corroborate that both cognitive systems are required for the manager to decide the firm's international orientation to exploit their extant products/resources in current international markets, i.e. both experiential knowledge and analysis are required. On the other hand, it seems that it is only by analysis that managers can increase its international orientation to explore –new foreign markets, new international business opportunities…–. The lack of influence of Sys-X on exploration can be explained by the fact that exploring entails new contexts, and experiential knowledge (Sys-X) is useless when the context is different to that where the manager gained his/her experience. Hard as we tried, we could not find a benchmark study to compare our results on this issue, a question that future investigations should perform.

H5–a higher level of international exploration has a negative impact on the growth of FSTS– is supported. This means that a higher international orientation to exploration leads to lower rates of

Table 2. PLS_SEM analysis

Relations		Stand. Path Coef.	t-Value	f^2	R^2	R^2 adj.
Exploitation→growth FSTS		0.20(+)	1.678	0.03	0.213	0.149
Exploration→growth FSTS		-0.39(*)	2.531	0.12		
Firm size→ growth FSTS		-0.17(*)	2.384	0.03		
Sys-C analysis→growth FSTS		-0.10 n.s.	0.817	0.01		
Sys-X intuition →growth FSTS		0.09 n.s.	1.370	0.01		
Manager Int Experience→ growth FSTS		0.07 n.s.	0.769	0.01		
Manager Experience→ growth FSTS		-0.20 n.s.	1.292	0.04		
Sys-C analysis→Exploitation		0.42 (***)	5.946	0.23	0.253	0.237
Sys-X intuition→Exploitation		0.20 (+)	2.242	0.05		
Sys-C analysis→Exploration		0.29 (*)	2.473	0.10	0.132	0.113
Sys-X intuition →Exploration		0.15 n.s.	1.596	0.03		
Model assessment Indicators	Estimated model	Saturated model	author			
Overall approximate model fit: SRMR	0.067	0.058				
Critical thresholds: at 95%	0.082	0.069	<95% bootstrap quantile (HI95 of SRMR) or <99% bootstrap quantile (HI95 of SRMR) (Henseler et al., 2016)			
at 99%	0.094	0.078				

Saturated model: the model where the correlations between all the latent variables are assessed. The estimated model is based on a total effect scheme, i.e. it considers the model structure depicted.
SRMR=standardized root mean square residual, discrepancy between the observed correlations and the model-implied correlation matrix
R2: endogenous constructs' explained variance; f2: effect size;
t-values thresholds at one-tailed test of alpha=0.05 and 5000 resamples: t(0.05, 4999) = 1.645;
t(0.01. 4999) = 2.327; t(0.005, 4999)= ;2.576 t(0.001, 4999) = 3.091. Coefficients significant at p-values:
+ p < 0.050; * p < 0.010; **p<0.005; *** p < 0.001; n.s. Not significant based on t(4999), one-tailed test

FSTS growth (beta= –0.39). Similarly, H6 –a higher level of international exploitation has a positive impact on FSTS growth– is also supported (beta= +0.20). This means that if SMEs want or need to grow FSTS in the short-term, then it is better to devote resources to exploitation rather than to exploration activities. If the firm allocates resources for both then FSTS growth will be deteriorated, which gives rise to the issue of the inability of firms to simultaneously develop successfully both orientations; there is a trade-off between them regarding the growth of international expansion.

A plausible explanation is that SMEs typically present internal constraints such as management experience, time to be allocated to managing both orientations, access to capital, talent and resources (Ebben & Johnson, 2005). This limits the chances to allocate resources to the exploration of new activities. In fact, a t-test of paired samples differences of means yielded a significant difference so exploitation is higher than exploration (mean diff (Exploit-Explore)

Figure 2. Path analysis

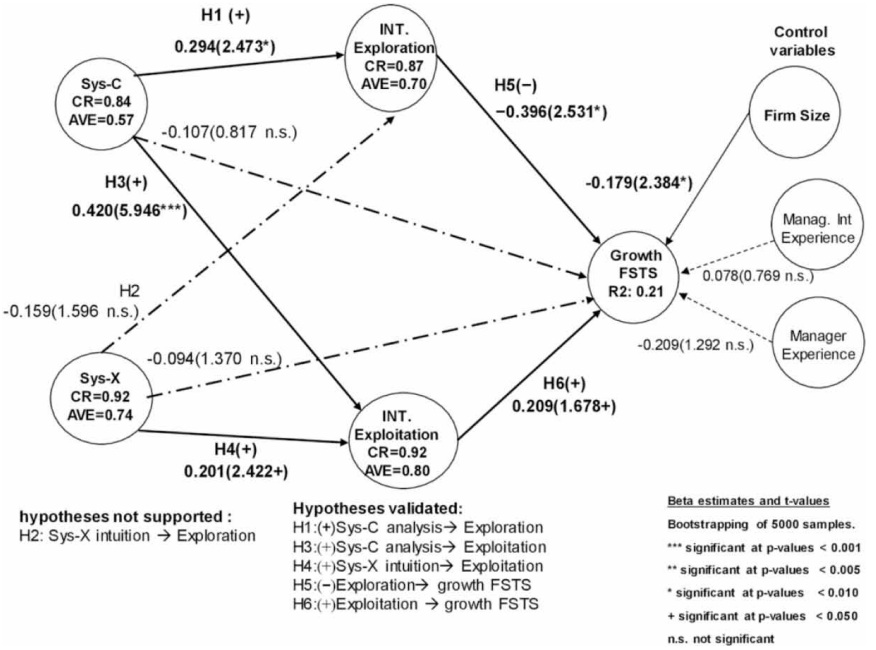


Table 3. Total, indirect and direct effects of Cognitive Systems and organizational ambidexterity on FSTS growth (overall assessment in PLS regression and bootstrapping of 5000 resamples)

Effects	Point Estimate Coeff.	t-Value
Specific indirect effects:		
Sys-C→Exploration→growth FSTS	-0.11 n.s.	1.517
Sys-X→Exploration→growth FSTS	-0.06 n.s.	1.310
Sys-C→Exploitation→growth FSTS	0.08 n.s.	1.539
Sys-X→Exploitation→growth FSTS	0.04 n.s.	1.355
Total indirect effects:		
Sys-C→growth FSTS	-0.03 n.s.	0.506
Sys-X→growth FSTS	-0.02 n.s.	0.467
Total effects (indirect plus path)		
Sys-C→growth FSTS	-0.14 n.s.	1.156
Sys-X→growth FSTS	0.07 n.s.	1.181
t-values thresholds at one-tailed test of alpha=0.05 and 5000 resamples: t(0.05, 4999) = 1.645; t(0.01. 4999) = 2.327; t(0.005, 4999)= ;2.576 t(0.001, 4999) = 3.091. Coefficients significant at p-values: + p < 0.050 * p < 0.010 **p<0.005 *** p < 0.001 n.s. Not significant based on t(4999), one-tailed test		

=-0.24, t-value=-4.08, significant at p-level<0.001 at alpha-level=5%). Furthermore, managers tend to consider exploration to be a more complex phenomenon than exploitation (Marín-Idárraga et al., 2016), requiring more time to yield a result. This lag in results will make the managers to prefer exploitation rather than exploration in the short-term. If the manager allocates resources to explore, then they must be detracted from those devoted to exploitation, which will have a final negative impact on FSTS. In fact, the focus on exploitation can be the appropriate response to the strong pressures on efficiency and prices to which organizations are subjected in the short-term (Cao et al., 2009; Gulati & Puranam, 2009; Raisch & Hotz, 2008), once that managers can more clearly understand extant knowledge, resources and capabilities and their functions by using them repeatedly (Kristal et al, 2010). However, if in the short-term SMEs may benefit from focusing on exploitation, this can have a negative impact in the long term (Dolz et al., 2019), in particular with regards to problems related with stagnation of sales and profitability (Levinthal & March, 1993; McNamara & Baden-Fuller, 2003; Smith & Tushman, 2005). Yet our metric for growth on FSTS was circumscribed to a three-year timespan. Future investigations should include metrics for the long-term growth to validate these results. This finding provides an interesting discussion, refuting the idea that exploitation and exploration are complementary (Marín-Idárraga et al., 2016; Prange & Verdier, 2011), that both are central to a firm's advancement (He & Wong, 2004; Kristal et al., 2010), have a positive impact on organizational performance (Peng & Lin, 2019) and that firms need to maintain both balanced capabilities succeed (Mudalige et al, 2019). Our findings are somehow consistent with Tsai & Ren (2019) and Pinho & Prange (2016), who found that firms should balance both orientations. A relevant question is that our finding is contrary to the prediction of Prange & Verdier's (2011) proposition 1, which claimed that international growth is expected in firms pursuing explorative internationalization than to those seeking exploitative internationalization. Our results pinpoint the negative impact of international exploration on FSTS short-term growth. Perhaps this can be attributed to the short-termist of our metric and that proposition 1 should be addressed in a timeframe above three years.

Despite the average international experience was 9.8 years, our sampled managers tended to trust more on their analytic reasoning (Sys-C) rather than their experiential reasoning (Sys-X), since a t-test of paired samples differences of means yielded a significant difference between both (mean diff (SysC-SysX)=0.62, t-value=8.13, significant at p-level<0.001 at alpha-level=5%). Furthermore, the impact of Sys-C on both exploration and exploitation was significantly positive and higher than the impact of Sys-X, the impact of which was only significantly positive in the case of exploitation. This means that managers do not rely on experiential knowledge when exploring, while both cognitive systems have a positive impact on exploitation. The lack of support to hypothesis H2 (sys-X →Int. Exploration) is relevant since, according to theory, the outcomes of experiential reasoning (Sys-X) can only be trusted when applied to environments that are similar to the settings where knowledge was originated (Kahneman, 2003; Kahneman & Frederick, 2002). This is why it has a positive impact on exploitation but has no relation with exploration. This is, somehow, counter-intuitive since exploration requires creativity to find new business opportunities (de Visser & Faems, 2015), and creativity tends to be higher when stemming from Sys-X. Yet these managers only trust on exploration by analysis (Sys-C). Our findings are consistent with Sternad et al. (2013), who found that personal engagement of SME's key managers has a positive impact on export.

Regarding the control variables, the growth of FSTS is higher for smaller than for larger SMEs. As the SME increases in size, it should expect lower FSTS growth rates. This can be explained by small versus large numbers in sales: it is more difficult to grow at the same speed as firms increase total sales, i.e. the total amount of sales required to keep the pace is higher when the denominator is higher. On the other hand, in our sample, neither the manager overall experience in the industry nor his/her international experience had an impact on the growth of FSTS.

CONCLUSION

This article contributes to a better understanding of the determinants of the SME's speed of internationalization by analysing the organizational orientation in terms of international ambidexterity and the use of the manager's cognitive systems. The inclusion of the manager's cognition in international business is very scarce (González-Loureiro & Vlačić, 2016; Maitland & Sammartino, 2015) and the combination of both topics can yield additional insights to answer the question of why some SMEs can speed up its international growth. Furthermore, previous studies returned doubts on the positive or negative consequences of ambidexterity for the short-term performance of SMEs (Ebben & Johnson, 2005; Gulati & Puranam, 2009; Lubatkin et al., 2006). We tried to answer these questions by relating the cognitive system to the international ambidexterity and the growth of foreign sales to total sales.

Cognitive systems (experiential and analytic) have a different influence on international exploitation and exploration. The two cognitive systems may complement each other and produce synergistic effects when it comes to international exploitation. In contrast, only the analytic cognitive system has a positive effect on international exploration. We found that, although none of the cognitive systems have a significant total effect on FSTS growth, they play a relevant role to explain the combination of exploration and exploitation the firms develop. We found that a higher international orientation to exploration relates negatively with the FSTS growth in the short-term, while a higher international orientation to exploitation is positively related. Thus, an international ambidexterity will not yield a higher growth of FSTS in the short-term but the results of one of them will compensate the outcomes of the other. Thus, if SMEs aim to increase sales in international markets in the short term, it should allocate resources to exploitation in a higher extent than those allocated to exploration. This trade-off is extremely relevant in the international business arena since it seems that international ambidexterity is quite difficult to yield a positive result in the short term. The effectiveness of investments in exploration cannot be realized immediately in the growth of sales so SMEs may expect a depression in the short-term growth when exploring new international business opportunities.

Our theoretical implication is that a portion of the emergence of accelerated patterns of internationalization is rooted in SME's international organizational ambidexterity (exploitative, explorative or ambidextrous), and this orientation is partly explained by the manager's cognitive systems. Since accelerated patterns of internationalisation require a quick international growth, firms following such patterns should allocate more resources to exploitation than to exploration. Otherwise, growth will be lower. The practical implications relate to the need for devoting time and resources to plan the activities required for competing internationally. SMEs must cope with the trade-off between allocating resources to exploit extant resources and capabilities and to explore new opportunities outside the firm and domestic markets and their implications in the short-term growth of international sales. If SMEs want to grow internationally they should carefully think on the amount of resources allocated to each orientation. Additionally, managers should use both cognitive systems when implementing exploitative activities, while only analytic reasoning should be used to explorative actions.

Our sample has some limitations. This study is limited in scope because we only tested a small sample of manufacturing firms from traditional industries and among SMEs located in a unique country/region. On the other hand, future studies should include variables for analysing the role of top management team and its cognitive diversity on the speed of internationalization. Finally, future studies should test the impact of these variables on other metrics of the speed of internationalization, such as the increase in the number of international markets (scope) and long-term growth. Overall, managerial cognition is determinant to explain the SME's international ambidexterity and the combination of exploration and exploitation activities display an opposite sign on the FSTS growth. The exploration-exploitation trade-off is still paradoxical - at least in the international business growth

- so the still unsolved question is how the SME can reach an ambidextrous international orientation without suffering from a fall in the short-term performance.

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REFERENCES

Acedo, F. J., & Jones, M. V. (2007). Speed of internationalization and entrepreneurial cognition: Insights and a comparison between international new ventures, exporters and domestic firms. *Journal of World Business*, *42*(3), 236–252. doi:10.1016/j.jwb.2007.04.012

Agor, W. H. (1984). Using intuition to manage organizations in the future. *Business Horizons*, *27*(4), 49–54. doi:10.1016/0007-6813(84)90057-0

Andresen, E., Lundberg, H., & Wincent, J. (2014). Processes in collaborative entrepreneurship: A longitudinal case study of how multiple actors exploit a radically new opportunity. *The International Entrepreneurship and Management Journal*, *10*(4), 713–726. doi:10.1007/s11365-014-0304-9

Autio, E., Sapienza, H. J., & Almeida, J. G. (2000). Effects of age at entry, knowledge, intensity, and immutability on international growth. *Academy of Management Journal*, *43*(5), 909. doi:10.2307/1556419

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, *16*(1), 74–94. doi:10.1007/BF02723327

Cao, Q., Gedajlovic, E., & Zhang, H. (2009). Unpacking Organizational Ambidexterity: Dimensions, Contingencies, and Synergistic Effects. *Organization Science*, *20*(4), 781–796. doi:10.1287/orsc.1090.0426

Casillas, J. C., & Acedo, F. J. (2013). Speed in the Internationalization Process of the Firm. *International Journal of Management Reviews*, *15*(1), 15–29. doi:10.1111/j.1468-2370.2012.00331.x

Chandra, Y., Styles, C., & Wilkinson, I. F. (2012). An opportunity-based view of rapid internationalization. *Journal of International Marketing*, *20*(1), 74–102. doi:10.1509/jim.10.0147

Chandra, Y., Styles, C., & Wilkinson, I. F. (2015). Opportunity portfolio: Moving beyond single opportunity explanations in international entrepreneurship research. *Asia Pacific Journal of Management*, *32*(1), 199–228. doi:10.1007/s10490-014-9400-1

Chin, W. W. (1998). The partial least squares approach to structural equation modeling: secondary title. *Methodology for Business and Management. Modern Methods for Business Research*, 295–336.

Dane, E., & Pratt, M. G. (2007). Exploring Intuition and its Role in Managerial Decision Making. *Academy of Management Review*, *32*(1), 33–54. doi:10.5465/amr.2007.23463682

Dasí, A., Iborra, M., & Safón, V. (2015). Beyond path dependence: Explorative orientation, slack resources, and managerial intentionality to internationalize in SMEs. *International Business Review*, *24*(1), 77–88. doi:10.1016/j.ibusrev.2014.06.003

de Visser, M., & Faems, D. (2015). Exploration and Exploitation within Firms: The Impact of CEOs' Cognitive Style on Incremental and Radical Innovation Performance. *Creativity and Innovation Management*, *24*(3), 359–372. doi:10.1111/caim.12137

Dolz, C., Iborra, M., & Safón, V. (2019). Improving the likelihood of SME survival during financial and economic crises: The importance of TMTs and Family Ownership for Ambidexterity. *Cuadernos de Economía y Dirección de la Empresa*, *22*(2), 119–136. doi:10.1016/j.brq.2018.09.004

Duncan, R., & Weiss, A. (1979). Organizational Learning: Implications for Organizational Design, Research in Organizational Behavior. *Research in Organizational Behavior*, (1), 75–123.

Ebben, J. J., & Johnson, A. C. (2005). Efficiency, flexibility, or both? Evidence linking strategy to performance in small firms. *Strategic Management Journal*, *26*(13), 1249–1259. doi:10.1002/smj.503

Field, A. (2009). Discovering Statistics Using SPSS ISM (London, England) Introducing Statistical Methods Series. SAGE Publications.

Figueira-de-Lemos, F., Johanson, J., & Vahlne, J. E. (2011). Risk management in the internationalization process of the firm: A note on the Uppsala model. *Journal of World Business*, *46*(2), 143–153. doi:10.1016/j.jwb.2010.05.008

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *JMR, Journal of Marketing Research*, *18*(1), 39–50. doi:10.1177/002224378101800104

González-Loureiro, M., & Vlačić, B. (2016). International business decisions and manager's cognitive style: opening up research avenues from cognitive behavioural strategy. *Gestão E Sociedade, 10*(27), 1522. <ALIGNMENT.qj></ALIGNMENT>10.21171/ges.v10i27.2131

Gulati, R., & Puranam, P. (2009). Renewal Through Reorganization: The Value of Inconsistencies Between Formal and Informal Organization. *Organization Science*, *20*(2), 422–440. doi:10.1287/orsc.1090.0421

Haaja, E. (2019). Why do some SMEs engage in joint internationalisation and others do not? Exploring the role of mental images in collective international opportunity recognition. *Journal of International Entrepreneurship*. Advance online publication. doi:10.1007/s10843-019-00253-4

Hair, J. F., Hult, G., Tomas, M., Ringle, C. M., & Sarstedt, M. (2013). A Primer on Partial Least Squares Structural Equation Modeling. *Long Range Planning*, *46*(1–2), 184–185. doi:10.1016/j.lrp.2013.01.002

Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The Use of Partial Least Squares Structural Equation Modeling in Strategic Management Research: A Review of Past Practices and Recommendations for Future Applications. *Long Range Planning*, *45*(5–6), 320–340. doi:10.1016/j.lrp.2012.09.008

He, Z. L., & Wong, P. K. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization Science*, *15*(4), 481–495. doi:10.1287/orsc.1040.0078

Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management & Data Systems*, *116*(1), 2–20. doi:10.1108/IMDS-09-2015-0382

Hilmersson, M., & Johanson, M. (2016). Speed of SME Internationalization and Performance. *Management International Review*, *56*(1), 67–94. doi:10.1007/s11575-015-0257-4

Hilmersson, M., Johanson, M., Lundberg, H., & Papaioannou, S. (2017). Time, Temporality, and Internationalization: The Relationship Among Point in Time of, Time to, and Speed of International Expansion. *Journal of International Marketing*, *25*(1), 22–45. doi:10.1509/jim.16.0013

Hohenthal, J., Johanson, J., & Johanson, M. (2003). Market discovery and the international expansion of the firm. *International Business Review*, *12*(6), 659–672. doi:10.1016/j.ibusrev.2003.06.001

Hsu, C. W., Lien, Y. C., & Chen, H. (2013). International ambidexterity and firm performance in small emerging economies. *Journal of World Business*, *48*(1), 58–67. doi:10.1016/j.jwb.2012.06.007

Jin, B., Jung, S., & Jeong, S. W. (2017). Dimensional effects of Korean SME's entrepreneurial orientation on internationalization and performance: The mediating role of marketing capability. *The International Entrepreneurship and Management Journal*, *14*(1), 195–215. doi:10.1007/s11365-017-0457-4

Johanson, J., & Vahlne, J.-E. (1977). The Internationalization Process of the Firm-a Model of Knowledge Foreign and Increasing Market Commitments. *Journal of International Business Studies*, *8*(1), 23–32. doi:10.1057/palgrave.jibs.8490676

Kahneman, D. (2003). A Perspective on Judgment and Choice: Mapping Bounded Rationality. *The American Psychologist*, *58*(9), 697–720. doi:10.1037/0003-066X.58.9.697 PMID:14584987

Kahneman, D., & Frederick, S. (2002). Representativeness Revisited: Attribute Substitution in Intuitive Judgment. In T. Gilovich, D. Griffin, & D. Kahneman (Eds.), *Heuristics and Biases* (pp. 49–81). Cambridge University Press. doi:10.1017/CBO9780511808098.004

Kickul, J., Gundry, L. K., & Whitcanack, L. (2009). Intuition Versus Analysis? Testing Differential Models of Cognitive Style on Entrepreneurial Self-Efficacy and the New Venture Creation Process. *Entrepreneurship Theory and Practice*, *33*(212), 439–453. doi:10.1111/j.1540-6520.2009.00298.x

Kristal, M. M., Huang, X., & Roth, A. V. (2010). The effect of an ambidextrous supply chain strategy on combinative competitive capabilities and business performance. *Journal of Operations Management*, *28*(5), 415–429. doi:10.1016/j.jom.2009.12.002

Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal, 14*(2 S), 95–112. <ALIGNMENT.qj></ALIGNMENT>10.1002/smj.4250141009

Levitt, B., & March, J. G. (1988). Organizational Learning. *Annual Review of Sociology*, *14*(1), 319–338. doi:10.1146/annurev.so.14.080188.001535

Lubatkin, M. H., Simsek, Z., Ling, Y., & Veiga, J. F. (2006). Ambidexterity and performance in small-to medium-sized firms: The pivotal role of top management team behavioral integration. *Journal of Management*, *32*(5), 646–672. doi:10.1177/0149206306290712

Maitland, E., & Sammartino, A. (2015). Managerial cognition and internationalization. *Journal of International Business Studies*, *46*(7), 733–760. doi:10.1057/jibs.2015.9

March, J. G. (1991). Exploration and Exploitation in Organizational Learning. *Organization Science*, *2*(1), 71–87. doi:10.1287/orsc.2.1.71

Marín-Idárraga, D. A., Hurtado González, J. M., & Cabello Medina, C. (2016). The Antecedents of Exploitation-Exploration and Their Relationship with Innovation: A Study of Managers' Cognitive Maps. *Creativity and Innovation Management*, *25*(1), 18–37. doi:10.1111/caim.12139

Martini, A., Laugen, B. T., Gastaldi, L., & Corso, M. (2013). Continuous innovation: Towards a paradoxical, ambidextrous combination of exploration and exploitation. *International Journal of Technology Management*, *61*(1), 1. doi:10.1504/IJTM.2013.050246

McNamara, P., & Baden-Fuller, C. (2003). Lessons from the Celltech Case: Balancing Knowledge Exploration and Exploitation in Organizational Renewal. *British Journal of Management*, *10*(4), 291–307. doi:10.1111/1467-8551.00140

Mudalige, D., Ismail, N. A., & Malek, M. A. (2019). Exploring the Role of Individual Level and Firm Level Dynamic Capabilities in SMEs' Internationalization. *Journal of International Entrepreneurship*, *17*(1), 41–74. doi:10.1007/s10843-018-0239-2

Novak, T. P., & Hoffman, D. L. (2009). The Fit of Thinking Style and Situation: New Measures of Situation-Specific Experiential and Rational Cognition. *The Journal of Consumer Research*, *36*(1), 56–72. doi:10.1086/596026

Peiris, I. K., Akoorie, M. E. M., & Sinha, P. (2012). International entrepreneurship: A critical analysis of studies in the past two decades and future directions for research. *Journal of International Entrepreneurship*, *10*(4), 279–324. doi:10.1007/s10843-012-0096-3

Peiris, I. K., Akoorie, M., & Sinha, P. (2015). Conceptualizing the Process of Opportunity Identification in International Entrepreneurship Research. In *Entrepreneurial Ecosystem* (pp. 193–218). Springer India. doi:10.1007/978-81-322-2086-2_8

Peng, M. Y. P., & Lin, K. H. (2019). Disentangling the antecedents of the relationship between organisational performance and tensions: Exploration and exploitation. *Total Quality Management & Business Excellence*, *0*(0), 1–17. doi:10.1080/14783363.2019.1604130

Pinho, J. C., & Prange, C. (2016). The effect of social networks and dynamic internationalization capabilities on international performance. *Journal of World Business*, *51*(3), 391–403. doi:10.1016/j.jwb.2015.08.001

Pla-Barber, J., & Escribá-Esteve, A. (2006). Accelerated internationalisation: Evidence from a late investor country. *International Marketing Review*, *23*(3), 255–278. doi:10.1108/02651330610670442

Prange, C., & Verdier, S. (2011). Dynamic capabilities, internationalization processes and performance. *Journal of World Business*, *46*(1), 126–133. doi:10.1016/j.jwb.2010.05.024

Prashantham, S., & Young, S. (2011). Post-Entry Speed of International New Ventures. *Entrepreneurship Theory and Practice*, *35*(2), 275–292. doi:10.1111/j.1540-6520.2009.00360.x

Puig, F., Gonzalez-Loureiro, M., & Ghauri, P. N. (2018). Running faster and jumping higher? Survival and growth in international manufacturing new ventures. *International Small Business Journal: Researching Entrepreneurship*, *36*(7), 829–850. doi:10.1177/0266242618777792

Raisch, S., & Hotz, F. (2008). Shaping the context for learning: corporate alignment initiatives, environmental munificence, and firm performance. In Strategic Reconfigurations: Building Dynamic Capabilities (p. 320). Edward Elgar Publishing.

Raisch, S., & Birkinshaw, J. (2008). Organizational ambidexterity: Antecedents, outcomes, and moderators. *Journal of Management*, *34*(3), 375–409. doi:10.1177/0149206308316058

Ringle, C. M., Wende, S., & Becker, J.-M. (2015). *SmartPLS 3*. Boenningstedt: SmartPLS GmbH. Retrieved from http://www.smartpls.com

Santos-Álvarez, V., & García-Merino, T. (2010). The role of the entrepreneur in identifying international expansion as a strategic opportunity. *International Journal of Information Management*, *30*(6), 512–520. doi:10.1016/j.ijinfomgt.2010.03.008

Smith, W. K., & Tushman, M. L. (2005). Managing Strategic Contradictions: A Top Management Model for Managing Innovation Streams. *Organization Science*, *16*(5), 522–536. doi:10.1287/orsc.1050.0134

Stephan, M., & Kerber, W. (2010). *"Ambidextrie": Der unternehmerische Drahtseilakt zwischen Ressourcenexploration und -exploitation ('Ambidexterity': Keeping the Balance between Resource Exploration and Exploitation)*. R. H. Verlag.

Sternad, D., Jaeger, S., & Staubmann, C. (2013). Dynamic capabilities of resource-poor exporters: A study of SMEs in New Zealand. *Small Enterprise Research*, *20*(1), 2–20. doi:10.5172/ser.2013.20.1.2

Tsai, H. T., & Ren, S. (2019). Antecedents of strategic ambidexterity in the context of internationalisation: A panel study of Taiwan Small and median-sized enterprises. *Technology Analysis and Strategic Management*, *31*(8), 986–1001. doi:10.1080/09537325.2019.1582764

Voss, G. B., & Voss, Z. G. (2013). Strategic Ambidexterity in Small and Medium-Sized Enterprises: Implementing Exploration and Exploitation in Product and Market Domains. *Organization Science*, *24*(5), 1459–1477. doi:10.1287/orsc.1120.0790

Wood, M. S., & Mckelvie, A. (2015). Opportunity evaluation as future focused cognition: Identifying conceptual themes and empirical trends. *International Journal of Management Reviews*, *17*(2), 256–277. doi:10.1111/ijmr.12053

Zahra, S. (2005). A theory of international new ventures: A decade of research. *Journal of International Business Studies*, *36*(1), 20–28. doi:10.1057/palgrave.jibs.8400118

Zhou, L., Barnes, B. R., & Lu, Y. (2010). Entrepreneurial proclivity, capability upgrading and performance advantage of newness among international new ventures. *Journal of International Business Studies*, *41*(5), 882–905. doi:10.1057/jibs.2009.87

Zucchella, A., Palamara, G., & Denicolai, S. (2007). The drivers of the early internationalization of the firm. *Journal of World Business*, *42*(3), 268–280. doi:10.1016/j.jwb.2007.04.008

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