

## **Internationalization Effects on Performance: the Case of the Portuguese Textile and Wearing Firms**

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### **ABSTRACT**

*The objective of this paper is to empirically examine the relationship between the firms' degree of internationalization and their financial performance. The literature about performance determinants is abundant however the relation between performance and internationalization in the context of Small and Medium Enterprises (SMEs) from a small and open economy is much less studied. This paper is focused on the Portuguese textile and wearing firms due to their importance for the economy. It is used an unbalanced panel data of 638 firms for the period from 2010 to 2016 and applied a random effects model. The results indicate that internationalization promotes firm performance, in particular when exports are directed to closer markets and conducted by small firms. Also, the presence of a non-linear relationship between internationalization and performance calls for managers' attention to its dysfunctional consequences for firm performance, especially at intermediate levels of internationalization.*

*Keywords: Internationalization, financial performance, export markets, SMEs, panel-data methodology, textile and wearing industry; JEL codes: G30*

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### **1. Introduction**

Small and medium enterprises (SMEs) play a critical role as suppliers of employment and are fundamental for local and regional communities' well-being. The adverse effects of the recent financial and economic crises prompted SMEs to seek their viability abroad, increasing their exports and looking attentively to more distant markets. This context highlights the importance to understand the determinants of firms' financial performance, namely, the impact of that internationalization effort.

European SMEs have in most cases directed their internationalization efforts to the nearest countries. However, a crucial

question that arises is whether firms mainly focused on the European market show different profitability levels than those with a wider geographic scope. The answer to this question could enable us to highlight the consequences for the SMEs profitability of the choice between proximity and a global approach (Zucchella, 2001).

Since theoretical predictions are not straightforward, the objective of this paper is to study the relationship between the degree of internationalization of Portuguese textile and wearing industry SMEs and their performance levels. This paper extends the literature on this topic since it is focused on a small European economy, with different

historical factors, financial markets, legal frameworks and business characteristics when compared to English-speaking countries, where most studies on SMEs have been conducted.

## 2. Literature review

### 2.1. Internationalization and firm profitability

The contribution of exports to firm growth through sales increase is straightforward. By broadening markets, creating room for expansion and enabling the achievement of economies of scale and improved efficiency, exporting to foreign markets is considered a crucial factor for firm growth and profitability (Lu & Beamish, 2006).

Since internationalization is a multi-layered concept, its relationship with performance must be approached with a set of different theories, namely, organizational learning, industrial organization or resource-based theories. As stated by Miller et al. (2016), the study of the effects of internationalization on performance should be explained through those multiple lenses, without being grounded in a specific theoretical framework.

Miller et al. (2016) identify three distinct facets of internationalization: international intensity, international diversity and international distance. International intensity captures the firm's commitment to serving customers in foreign markets. International diversity captures the breadth versus depth of internationalization by studying the dispersion of a firm's operations across the host countries. International distance refers to the geographic, cultural, institutional, and economic differences between the characteristics of the firm's home country and those of the host countries. International distance introduces costs and benefits, with firms normally entering first the nearest markets (Johanson & Vahlne, 1977) and experience regional effects (Goerzen & Beamish, 2003; Qian et al., 2008).

Pangarkar (2008) argues that prior literature on the relationship between

internationalization and performance is hampered by two interrelated issues: lack of uniformity across studies when measuring the key constructs (degrees of internationalization and firm performance) and inconsistent results.

Much of the literature on international strategy tends to agree that the benefits of internationalization outweigh the increased costs and hence should positively impact firm performance (Ghoshal, 1987; Gomes & Ramaswamy, 1999). Regarding SMEs, some authors argue that this conclusion is not so clear-cut, due to their internal constraints and ability to compete in international markets (Pangarkar, 2008). International expansion involves high risks and uncertainties, therefore, firms having the organizational and resource endowments required to deal with those risks are likely to be more proactive in international expansion, as these resources and capabilities are key success factors for innovation (Singla & George, 2013).

According to Kim et al. (1993), Lu & Beamish (2001), Pangarkar (2008), Miller et al. (2016), and others, the main constraints for SMEs internationalization are: i) the lack of the necessary information to exploit international opportunities (due to the shortage of managerial resources); ii) an increase in the requirements for coordination and communication and; iii) an increase in the risk level for the firm, due to the exposition to new risk factors (political, exchange rate, global market behavior, etc.). Concerning the benefits from internationalization, the literature refers the following: i) exporting is a less capital intensive path (than FDI) providing firms with fast access to foreign markets and the opportunity to gain valuable international experience; ii) to exploit market niches and economies of scale and scope (this specially if volume gains were constrained in the domestic market due to saturation or increased competition); iii) the presence in multiple multinational markets leads to an increase in market power; iv) to provide better services to their clients and avoid tariffs (in the case of FDI) and; v) to benefit

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from export incentives from the home government or, in the case of FDI, from the host country.

Lu & Beamish (2006) argue that exporting is a relatively easy and fast way to enter foreign markets because it involves comparatively low levels of commitment and risk, without the need to establish subsidiaries and letting open the decision to easily withdraw due to political instability or adverse market conditions. These advantages are particularly attractive to SMEs, which typically face resource constraints and do not want to make excessive resource commitments and be exposed to unreasonably high investment risks.

Empirical results of prior studies have been inconclusive with some studies finding a positive impact of the degree of internationalization on the profitability of SMEs (e.g., Grant, 1987; Daniels & Bracker, 1989; Geringer et al., 1989; Kim et al., 1989; Qian, 1996, 1997, 2002; Delios & Beamish, 1999; Tsao & Chen, 2012; Hsu et al., 2013; de Jong & van Houten, 2014), others finding no effect (e.g., Hughes et al., 1975; Buckley et al., 1977; Kumar, 1984; Rugman et al., 1985; Buhner, 1987; Geringer et al., 1989; Hoskisson & Hitt, 1990; Morck & Yeung, 1991; Tallman & Li, 1996; Vithessonthi, 2016) and still others finding a negative effect (e.g., Siddhartan & Lall, 1982; Michel & Shaked, 1986; Shaked, 1986; Singla & George, 2013; Xiao et al., 2013; Vithessonthi & Racela, 2016).

Recently, scholars have predicted curvilinear relationships, again with little consistency across studies. Lu & Beamish (2001), Ruigrok & Wagner (2003), Chiao et al. (2006) and Miller et al. (2016) predicted and found support for a U-shaped relationship. Other studies (e.g., Geringer et al., 1989; Hitt et al., 1997; Gomes & Ramaswamy, 1999) have theorized and found an inverted U-shaped relationship, primarily based on an increase in organizational costs (coordination and communication) as the diversity grows beyond the optimal level. Finally, another set of studies (e.g., Riahi-Belkaoui, 1998; Contractor et al., 2003; Lu & Beamish, 2004;

Thomas & Eden, 2004) argued for and/or found a multi-stage sigmoid relationship. The sigmoid shape is an attempt to reconcile the last three decades of research into a three-stage model (Contractor, 2007; Ruigrok et al., 2007). Ruigrok et al. (2007) also indicate that the research in this field needs to focus on the role of some promising moderating variables, which may add to knowledge that has academic as well as managerial relevance.

Although some researchers attributed the mixed findings to measurement issues (e.g., Goerzen & Beamish, 2003), the empirical evidence also reflects the distinctive conceptualizations and theoretical lenses, thus confirming that internationalization is a complex phenomenon.

Regarding the particular case of the textile and wearing sectors, some previous analyzes were made by Guercini (2004), Eusebio et al. (2007) and Zucchella and Siano (2014). These studies are particularly focused on the competitive factors behind the firms' internationalization processes and not in the effects on profitability.

## 2.2. Additional determinants of firm performance

In order to rule out alternative determinants of the sampled firms' performance, and following previous authors (e.g., Miller et al., 2016; Fernández-Olmos et al., 2016; Vithessonti, 2016), it is included a set of control variables, namely, firm age, size, indebtedness, intangible assets, advertising expenses and the exchange rate.

Theoretically, older firms should possess a greater stock of knowledge and experience, which could have a positive impact on performance. Older firms have enjoyed the benefits of learning, are not prone to the liabilities of newness and can, therefore, enjoy superior performance. These resources can reduce some of the costs associated with the "liabilities of foreignness". Older firms could also be better equipped to learn from their experiences in the past and would possess more skills to implement their learning in new undertakings

(Singla & George, 2008). Yet, as firms age they tend to become more conservative and prone to inertia (Hannan & Freeman, 1984; Aggarwal & Gort, 1996). Albeit the impact of age on performance is ultimately an empirical question our expectation is that age negatively moderates the internationalization-performance relationship.

Regarding the impact of size on performance, the literature points to the fact that size can be a source of competitive advantage because larger firms have at their disposal greater technical and commercial opportunities, allowing them access to economies of scale, greater bargaining power and the capability to raise barriers to deter potential competitors or have an easier access to capital markets (Dhanaraj & Beamish, 2003; Thomas & Eden, 2004). Based on these arguments, several authors (e.g., Tallman & Li, 1996; Fernández & Nieto, 2006; Claver et al., 2009) show that resource availability – proxied by firm size – positively correlates to the extent of internationalization. Nevertheless, the fixed costs and organizational inefficiencies associated with larger size could outweigh the benefits of increased market power, with the larger flexibility of smaller firms being a competitive advantage (Chen & Hambrick, 1995). In sum, the existence of competitive advantages positively related to size also remains an empirical issue.

Regarding leverage, some studies show that SMEs prefer going into debt before increasing capital to finance their investments, thus avoiding the entry of external shareholders (Anderson et al., 2003). However, other studies show that SMEs prefer to be more prudent, not going into debt in order to avoid losing their independence to creditors (López-García & Aybar-Arias, 2000). Given that SMEs could have specific concerns in terms of privacy, control and generational transition, they tend to prefer internal financing policies, favoring the reinvestment of their own funds to capital increases or long-term debt (Gallo et al., 2004), nevertheless their attitude towards debt could change as generations, managers

and the business as a whole evolves (Lussier & Sonfield, 2009). Debt ratios are included because a firm's ownership may influence its capital structure (Demsetz & Lehn, 1985; Randøy & Goel, 2003) and in line with the agency and pecking order theories we expect a negative relationship between debt levels and financial performance.

Knowledge and innovation, as a result of R&D activities, should have an impact on firm performance. Departing from a knowledge-based view of the firm, Vithessonthi & Racela (2016) find that the level of R&D is negatively associated with firm performance but the level of internationalization has no direct effect on the return on assets, albeit a positive effect on the return on sales. The authors also find weak evidence for the moderating effect of internationalization on the relationship between R&D intensity and firm performance. The negative relation between R&D and the return on assets is attributed to the high degree of uncertainty and risk associated with capital investment needed to develop R&D activities, so that in the near term R&D brings about negative returns. Due to the lack of data about SMEs' R&D, we will consider intangible assets as a proxy for R&D, computing it as the ratio of intangible assets to total assets. Additionally, we include advertising intensity, defined as the ratio of the firm's advertising expenditures to total sales, to measure the level of proprietary content in marketing assets. Finally, the exchange rate is also included as a control variable.

### 2.3. The hypotheses

Following the literature review, and focusing on the Portuguese textile and wearing industry SMEs, the following hypotheses are tested in this paper:

H1: There is a positive relationship between SMEs level of export dispersion/intensity/distance and financial performance

H2: There is a negative relationship between SMEs age and financial performance

H3: There is a positive relationship between SMEs size and financial performance

H4: There is a negative relationship between SMEs indebtedness and financial performance

H5: There is a negative relationship between SMEs intangible assets/advertising intensity and financial performance

H6: There is a non-linear relationship between SMEs level of export intensity/diversity/distance and financial performance

H7: There are moderating effects of internationalization on the effects of particular variables on SMEs performance (namely, age, size and leverage).

### 3. Definition of variables, data and methodology

#### 3.1. Dependent variable

Prior studies have used a broad range of performance measures ranging from outcomes achieved in the product markets (such as sales growth: Siddharthan & Lall, 1982; Grant, 1987), to accounting measures (such as ROA, ROS and ROE: Kumar, 1984; Rugman et al., 1985; Shaked, 1986; Daniels & Bracker, 1989; Riahi-Belkaoui, 1998; Lu & Beamish, 2001) as well as market-based measures (such as Beta and risk-adjusted returns: Hughes et al., 1975; Michel & Shaked, 1986; Buhner, 1987; Goerzen & Beamish, 2003). A key problem with narrow measures is that they may not be representative of firm performance, which may differ from traditional profitability ratios (Pangarkar, 2008). For instance, many SMEs in the early stages of their evolution might place a strong emphasis on sales growth.

The use of ROA is widely supported by the literature and has been used in several studies analyzing the relationship between internationalization and firm performance (e.g., Majocchi & Zucchella, 2003; Singla & George, 2013; Vithessonthi, 2016; Vithessonthi & Racela, 2016), being generally considered to be a key performance indicator and superior to alternative measures such as ROE which is sensitive to the firm's

capital structure (Miller et al., 2016). ROA is computed as net income scaled by the book value of total assets. In order to check robustness, we also proxy financial performance by the ratio between EBITDA and total assets (REBITDA) and by the ratio between EBIT and total assets (REBIT).

#### 3.2. Independent and control variables

Concerning the variable "international diversification", a consensus is still lacking on the best or true measure (Pangarkar, 2008). The use of a uni-dimensional measure such as the ratio of exports to total sales does not take into account the geographical distribution of sales, i.e., whether or not they are geographically well balanced in major world markets, a factor which has relevant implications for performance. Additionally, as stated by Majocchi & Zucchella (2003), it can be argued that, given the existence of the internal market and a single currency, exporting to other European Union countries cannot strictly be defined as a form of internationalization. Thus, we consider a set of alternative measures of internationalization, trying to account both the depth (foreign sales) and breadth (dispersion to different markets: national, EU or the rest of the world). This should allow us to identify possible differences in profitability between regional and global players.

Firstly, following Pangarkar (2008), we use a combination of the traditional proportion of foreign sales variable and the dispersion of foreign sales across geographic regions, albeit due to data availability we can only distinguish between the EU and the rest of the world markets:

$$DOI_1 = \% \text{ foreign sales} / [(\% \text{ sales to EU countries})^2 + (\% \text{ sales to the rest of the world})^2]$$

We also employ an alternative measure, which is grounded in the psychic distance and location perspective (Johanson & Vahlne, 1977; Hitt et al., 1997):

$$DOI_2 = (1 + \% \text{ sales to EU countries}) + (2 + \% \text{ sales to the rest of the world})$$

Notice that the weights (1 and 2) are arbitrarily assigned and it is tested the robustness of the results to alternatives.

Secondly, following the majority of the previous literature (e.g., Miller et al., 2016), “international intensity” is measured by the traditional and simpler measures of internationalization depth, measured as the percentage of total sales exported to the EU and to the rest of the world (respectively, EXPEU and EXPRW).

Even though our paper is focused on the relation between internationalization and performance, we include a set of control variables traditionally used in studies about performance determinants: firm age and firm size (AGE and SIZ measured, respectively, as the log of the number of years since the firm’s inception and the log of total assets), debt (TD = Total liabilities/ Total assets and

Applying the criteria for SMEs definition (Commission Recommendation 2003/361/EC), excluding a large number of micro firms (which employ fewer than 10 persons and whose annual turnover and/or annual balance sheet does not exceed 2M€), considering only firms already existing in 2010 and presenting at least 5 years of complete data from 2010 to 2016, excluding firms with negative debt ratios or liabilities greater than assets and winsorizing all variables at the 1<sup>st</sup> and 99<sup>th</sup> percentiles to mitigate the impact of extreme values and potential data coding errors, we obtained an unbalanced panel data of 638 firms (281 and 357, respectively, for sectors 13 and 14).

The sample accounts for 29,800 employees, a turnover near 4,438 M€ and total assets of 4,280 M€ in 2016, comprising 65% of small firms (416), 35% of medium firms (222) and an average exports ratio slightly over 50%.

Before estimating the different models we present in Table 1 some descriptive statistics and the correlation matrix of the

its subdivision in long-term and short-term debt, LTD and STD), intangible assets (INTAG, measured as a proportion of total assets), advertising expenditures (AD, measured as the ratio of the firm’s advertising expenses to sales) and exchange rate (EXC - average annual USD/EUR exchange rate).

### 3.4. Data and methodology

In this paper we use a sample of Portuguese industrial SMEs from the industrial sectors 13 (textile) and 14 (wearing apparel) (according to the *European Classification of Economic Activities – NACE – Rev. 2*) obtained from SABI (*Sistema de Análise de Balanços Ibéricos*), a financial database powered by Bureau van Dijk. According to the Portuguese Textile and Wearing Association ([www.atp.pt](http://www.atp.pt)) in 2017 the two sectors employed 137,000 persons, had a turnover of 7,500 M€ and exported over 5,200 M€, being thus very significant for the Portuguese economy.

variables. According to Gujarati & Porter (2008), when the correlation coefficients are above 50%, the problem of collinearity becomes significant. Observing the correlation coefficients between the independent variables, only in one circumstance it is above 50%, albeit those variables will not be used jointly. Therefore the problem of collinearity between explanatory variables will not be particularly relevant.

The relation between internationalization and performance is addressed with a panel data methodology estimated through three different regression models: Pooled Ordinary Least Squares (POLS), Fixed Effects Model (FEM) and Random Effects Model (REM). Applying the Breusch-Pagan and Hausman tests to choose the most appropriate regression technique, the Breusch-Pagan test leads to the rejection of the null hypothesis, indicating that REM is more appropriate than POLS whereas the Hausman test fails to reject the null hypothesis that REM is preferable to FEM.

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**Table 1. Descriptive statistics (average and standard deviation) and correlation matrix between independent variables.**

	aver.	s.d.	1	2	3	4	5	6	7	8	9	10	11
ROA	0.029	0.070											
REBITD	0.087	0.085											
A													
REBIT	0.052	0.079											
DOI <sub>1</sub>	375.16	9153.2	1	-	-	-	-	0.02	-	0.03	-	-	0.01
				0.05	0.04	0.01	0.01	5	0.01	1	0.00	0.00	3
				2	8	6	2	(*)	5	(**)	6	1	
				(***)	(***)								
DOI <sub>2</sub>	3.502	0.401		1	0.94	0.27	0.08	0.07	-	-	0.02	-	-
					9	0	4	6	0.01	0.00	4	0.01	0.03
					(***)	(***)	(***)	(***)	9	7	6	6	(**)
						-	0.06	0.40	-	0.02	0.01	-	-
EXPEU	0.452	0.387			1	0.04	7	2	0.02	1	7	0.01	0.02
						6	6	5	5	(*)	3	9	(*)
						(***)	(***)	(***)					
EXPRW	0.051	0.126				1	3	2	0.01	-	0.02	-	-
						1	3	2	5	0.08	3	0.01	0.02
						A	(***)	(***)		(***)		2	(*)
						T	1	1					
AGE	2.940	0.674				M		0.39	-	-	-	-	-
								3	0.05	0.31	0.04	0.05	0.15
								(***)	8	7	6	1	2
								1	(***)	(***)	(***)	(***)	(***)
SIZ	14.543	0.851						1	0.09	-	0.00	-	-
									3	0.31	6	0.02	0.12
									(***)	(***)	4	3	(***)
									1				
LTD	0.140	0.156								-	0.01	-	0.00
										0.35	1	0.00	8
										4	6		
										(***)			
										1			0.09
STD	0.495	0.214									-	-	2
											0.01	0.10	(***)
											2	7	(***)
											1	0.01	-
INTAG	0.003	0.015										1	0.01
													9
AD	0.035	1.005										1	-
													0.04
													2
													(***)
EXC	1.268	0.105											1

Note: s.d. is the standard deviation. \* p < 0.10; \*\* p < 0.05; \*\*\* p < 0.01;

#### 4. Empirical results

The regression results for the random-effects model are presented in Table 2, where the three alternative dependent variables (ROA, REBITDA and REBIT) are run on the different variables for “internationalization” and the control variables, thus testing hypothesis 1 to 5.

The random-effects model results present a R<sup>2</sup> between 11 and 17%. The first rows in Table 2 evidence that “internationalization” (dispersion, intensity and distance) seems to have a significant impact on performance, albeit without a clear sign, so that we can partially confirm H1. Exports’ dispersion seems to have a negative effect, whereas exports’ intensity and

distance seems to have a positive impact, thus confirming the results from Kim et al. (1989), Delios & Beamish (1999), Pangarkar (2008) and Singla & George (2013). The results for the control variables confirm the previous literature since younger, larger and less indebted firms tend to present better performance measures (measured by ROA, REBITDA or REBIT). So, these results confirm our hypotheses H2, H3 and H4, albeit not confirming H5. Notice also that the exchange rate appears with the expected negative sign, indicating that a lower exchange rate increases profitability due to the increase in sales it promotes outside the euro area.

**Table 2. Random-effects model results**

	ROA	ROA	REBITD <sup>T</sup>	REBIT	ROA	REBITD	REBIT
C	0.114 (***)	0.102 (***)	0.202 (***)	0.125 (***)	0.126 (***)	0.208 (***)	0.145 (***)
DOI <sub>1</sub>	-0.000 (***)	-0.000 (***)	-0.010 (***)	-0.000 (***)			
DOI <sub>2</sub>	0.010 (***)	0.011 (***)	0.010 (**)	0.015 (***)			
EXPEU					0.014 (***)	0.014 (***)	0.019 (***)
EXPRW					-0.002	0.002	0.004
<i>Controls</i>							
AGE	-0.023 (***)	-0.023 (***)	-0.028 (***)	-0.025 (***)	-0.022 (***)	-0.027 (***)	-0.025 (***)
SIZ	0.009 (***)	0.009 (***)	0.007 (***)	0.009 (***)	0.010 (***)	0.008 (***)	0.011 (***)
LTD	-0.177 (***)	-0.177 (***)	-0.193 (***)	-0.192 (***)	-0.175 (***)	-0.191 (***)	-0.190 (***)
STD	-0.143 (***)	-0.142 (***)	-0.170 (***)	-0.153 (***)	-0.142 (***)	-0.170 (***)	-0.153 (***)
INTAG	-0.026		0.079	-0.024			-0.064 (***)
AD	-0.000		0.000	-0.001			
EXC	-0.067 (***)	-0.067 (***)	-0.044 (***)	-0.065 (***)	-0.067 (***)	-0.044 (***)	-0.064 (***)
<i>Overall R<sup>2</sup></i>	0.17	0.16	0.12	0.13	0.15	0.11	0.12

Notes: Standard-deviations presented in brackets. \* p< 0.10; \*\* p< 0.05; \*\*\* p< 0.01.

Since one of the objectives of this paper is to test the presence of non-linear effects of internationalization on performance, we test the internationalization variables and their squares as independent variables, thus testing H6. Table 3 presents the results testing the presence of a non-linear relationship, where for brevity reasons only the most significant specifications are presented being the complete results available upon request. The results depend on the internationalization measure used, with columns I and II evidencing the absence of any relation for DOI<sub>1</sub> (happening the same when using the variables EXPEU and EXPRW). Regarding the variable DOI<sub>2</sub> there is clear evidence of a

non-linear relationship with performance. For instance, column IV presents the interesting result of a sigmoid relation, where the financial benefits of an early internationalization are later potentially out weighted by the higher costs of managing and coordinating international activities when the firm attains a higher degree of internationalization. Surpassing that stage, firms start again to enjoy the financial benefits provided by increasingly selling abroad. The presence of these non-linearities confirms previous results from Qian (2002), Lu & Beamish (2004) and Ruigrok et al. (2007) and represents one of the main findings of the present paper.

**Table 3. Random-effects model (testing the presence of non-linearities). ROA as dependent variable.**

	I	II	III	IV	V
C	0.333 (*)	0.026 T A	0.303 (*)	-4.379 (*)	55.973 (*)
DOI <sub>1</sub>	0.000	-0.000 T			
DOI <sub>1</sub> <sup>2</sup>	-0.000 (**)	0.000 M			
DOI <sub>1</sub> <sup>3</sup>		0.000			
DOI <sub>1</sub> <sup>4</sup>		0.000			
DOI <sub>2</sub>	-0.190 (*)		-0.178 (*)	3.887 (**)	-65.834 (*)
DOI <sub>2</sub> <sup>2</sup>	0.029 (**)		0.028 (*)	-1.124 (**)	28.948 (*)
DOI <sub>2</sub> <sup>3</sup>				0.112 (**)	-5.639 (**)
DOI <sub>2</sub> <sup>4</sup>					0.411 (**)
<i>Controls</i>					
AGE	-0.018 (***)	-0.018 (***)	-0.018 (***)	-0.018 (***)	-0.018 (***)
SIZ	0.010 (***)	0.011 (***)	0.011 (***)	0.011 (***)	0.011 (***)
TD	-0.155 (***)	-0.156 (***)	-0.155 (***)	-0.154 (***)	-0.155 (***)
<i>Overall R<sup>2</sup></i>	0.14	0.13	0.13	0.13	0.13

Notes: Standard-deviations presented in brackets. \* p< 0.10; \*\* p< 0.05; \*\*\* p< 0.01.

Regarding H7, Table 4 presents the results when testing for moderating effects, in order to see if the effects of those variables are statistically different when differentiating firms by size, age or indebtedness levels.

The results in the first five columns indicate that the negative values for the interaction coefficient evidence that firm age moderates the positive relationship between internationalization and profitability. The variables DOI<sub>2</sub> and EXPEU/EXPRW are significantly positive and when multiplied by AGE change their sign, whereas the interaction variable is significantly negative. This result means that the positive impact of

internationalization on performance is greater for younger firms, that is, those firms seem to be in a better position to leverage the opportunities provided by internationalization. The same happens when considering the moderating effects of indebtedness, with the positive relation between internationalization and performance being reversed when firms present higher levels of debt. Albeit not finding any evidence for moderating effects of size, the results confirm H7 and some previous authors (e.g., Singla & George, 2013).

**Table 4 – Random-effects model (moderating effects). ROA as dependent variable.**

	I	II	III	IV	J	V	VI	VII	VIII	IX	X
C	-0.075 (**)	-0.065 (**)	0.011	0.013	T	0.007	-0.131 (***)	-0.123 (***)	0.007	0.013	0.002
DOI <sub>1</sub>		-0.000 (**)			A			0.000			
DOI <sub>2</sub>	0.021 (***)	0.020 (***)			T		0.046 (***)	0.045 (***)			
EXPEU			0.038 (***)		M	0.039 (***)			0.044 (***)		0.046 (***)
EXPRW				0.086 (**)		0.089 (**)				0.045	0.056 (**)
<i>Controls</i>											
AGE	-0.003	-0.003	-0.015 (***)	-0.016 (***)		-0.013 (***)	-0.018 (***)	-0.018 (***)	-0.018 (***)	-0.017 (***)	-0.018 (***)
SIZ	0.011 (***)	0.011 (***)	0.011 (***)	0.011 (***)		0.011 (***)	0.010 (***)	0.010 (***)	0.011 (***)	0.011 (***)	0.011 (***)
TD	-0.157 (***)	-0.157 (***)	-0.156 (***)	-0.156 (***)		-0.156 (***)	0.016	0.022	-0.136 (***)	-0.152 (***)	-0.130 (***)
DOI <sub>1</sub> x AGE		0.000									
DOI <sub>2</sub> x AGE	-0.000 (***)	-0.000 (***)									
DOI <sub>1</sub> x TD								-0.000			
DOI <sub>2</sub> x TD							-0.049 (***)	-0.051 (***)			

EXPEU <sub>x</sub> AGE									-0.008 (*)	-0.008 (*)
EXPRW <sub>x</sub> AGE									-0.031 (**)	-0.031 (**)
EXPEU <sub>x</sub> TD									-0.044 (***)	-0.047 (***)
EXPRW <sub>x</sub> TD									-0.084 (*)	-0.094 (**)
Overall R <sup>2</sup>	0.14	0.14	0.13	0.13	0.13	0.14	0.14	0.13	0.12	0.14

Notes: Standard-deviations presented in brackets.\* p< 0.10; \*\* p< 0.05; \*\*\* p< 0.01.

## 5. Conclusion

The objective of this exploratory paper is to empirically examine the relationship between the firms' degree of internationalization and their financial performance. It is used an unbalanced panel data of 638 Portuguese SMEs from the textile and wearing sectors for the period 2010-16.

In line with much of the literature on Born Global firms we find some support for our hypothesis that firm performance is positively correlated to internationalization, in particular when this variable is measured in terms of intensity and distance. On the contrary, international diversification seems to have a negative impact on performance. Nevertheless, that positive relationship is not linear, being evidenced a non-linear relationship between the variable DOI<sub>2</sub> and performance which highlights the higher costs brought up by the “liability of foreignness” and the psychic distance as well the higher coordination costs entered by a firm in an advanced stage of internationalization. These non-linearities are a relevant issue since different firms are in distinct phases of their internationalization processes, eventually “negative” ones, being thus important to support them to surpass those phases increasing their internationalization levels. Accordingly, managers are encouraged to identify their position on the internationalization-performance relation in order to determine the desirability of further international expansion. Without appropriate capabilities

greater internationalization may not lead to better performance. Thus, a key task for SMEs in general but particularly in the textile and wearing sectors, is to build up their capabilities in areas such as branding and marketing, technology development, financing and other managerial capabilities useful for international expansion. Naturally that remains the question of which comes first — capabilities or internationalization.

Globally speaking, the non-linear nature of the relationship between internationalization and performance calls for major attention to these effects by managers who must acknowledge that internationalization brings dysfunctional consequences for firm performance, especially at intermediate levels of internationalization.

Regarding the presence of moderating effects we find that older firms seem to have more difficulty in translating a higher level of exports into a higher return on their assets. That is, aged firms seem to be less able to take advantage of the benefits of internationalization, possibly due to internal operational inefficiencies or to the fact that export products to mature and highly competitive markets with lower margins. This result highlights the importance to further study the impact of firm age on performance and perhaps implement strategies to assist those firms in their internationalization efforts, helping them to surpass the “liability of foreignness”. Larger firms present a better financial performance,

possibly a result of the positive relationship between resources and performance. This evidence that bigger firms outperform smaller ones brings an important policy-making implication. Typically, firms in the Portuguese textile and wearing sectors are micro or small firms, so policymakers should create an adequate set of incentives to foster mergers and acquisitions, as a way to improve firm profitability. Finally, more indebted firms are less profitable, independently of the maturity of the debt. This result, which is typically found in the literature, is in line with the predictions of the agency and pecking theories, since a high level of leverage imposes a fixed financial commitment on the firm, reducing the free cash flows available to management.

Some limitations of this study should be mentioned: i) firms' performance is affected by many variables that were not considered (e.g., managerial labor and product markets, political and economic factors or even the personality of shareholders and managers), meaning that the results should be treated with caution; ii) our study is focused on a sample of Portuguese firms, enabling us to control for the characteristics of the home market, so that in order to generalize our findings, scholars may seek to test our hypotheses in other countries; iii) the measures of performance and internationalization used in the literature differ widely, leaving us with the question whether our results are dependent on the measures used and on the specific context of the Portuguese firms.

Regarding future developments, we can mention the following: i) study at a "case-study" level the effect on profitability of external alliances between firms from the textile and wearing sectors, since they allow SMEs to overcome many of the aforementioned managerial resources constraints to international growth; ii) perform cross-country analysis of the internationalization-performance relationship, instead of using a single country sample; iii) study the different impacts on performance coming from internationalization to specific markets,

namely the differences brought up by the choice between near and distant markets; iv) consider prior experience with international expansion and uncover inter-firm heterogeneity in firms' abilities to benefit from internationalization.

This paper makes a contribution to distinguish between international dispersion, intensity and distance, facilitating the interpretation of their different effects on firm profitability. Additionally, the results evidence the fact that internationalization is a multi-layered concept, so that its relationship with performance can be explained by a set of distinct theories, namely those based on resources or organizational learning. We hope this study stimulates future research on this still unexplored topic of firm performance determinants.

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