THE INTERNATIONALISATION PATTERN OF MEDIUM SIZED FIRMS: IN SEARCH OF EXPLANATORY FACTORS[*]

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ABSTRACT

This paper is concerned with studying the influence of firm-specific factors on international involvement patterns of medium-sized firms (MSFs). Based on extant literature on internationalisation processes, a number of hypotheses was formulated. These were tested for a sample of 241 Portuguese MSFs and with recourse to an Ordered Multinomial Logit model. It was found that firm size, product development capabilities and belonging to traditional industries were associated with higher levels of international involvement, while the adoption of cost-based strategies had a negative influence in this regard. The research provided some support to the stages approach but clearly ruled out a 'mechanistic' perspective. Looking at firm characteristics alone was not enough for explaining internationalisation patterns. The need for a wider, more encompassing, approach was identified.

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INTRODUCTION

A recent review of international management literature (Werner, 2002) identifies a dozen distinct research topics, which may be further aggregated in four main strands: internationalisation and entry mode decision; international exchange (mostly exports); international alliances and transfer of knowledge; and multinational enterprises (MNEs) behaviour and management. Interestingly, company size was absent from the topics and sub-topics listed by the author. In our opinion this does not happen by chance. In fact, although company size is frequently implicit in international business research – for instance in the divide between internationalisation/exports/entry mode and MNE management – it is very seldom made explicit. Yet it may be a key factor insofar as it acts as a constraint on international commitment and expansion. Of course, there has been some concern with SME internationalisation (v.g. Buckley, 1989/1993; Buckley, Newbould and Thurwell, 1988; Korhonen, Luostarinen and Welch, 1996; Knigth, 2001; Mathews, 2002, OECD, 1997) and with global start-ups and 'born globals' (Oviatt and McDougall, 1994 and 1995; Rennie, 1993; Jones, 2001; Simões and Dominguinhos, 2002). Talking about SMEs, however, is not specific enough: the scope is so broad that many differences associated with size may remain hidden. There is a need to 'deconstruct' the SME concept, by decomposing it in different size categories. The present paper is headed to make a contribution in that regard, by focussing on medium-sized firms (that, firms with employment between 50 and 2000) only.

More particularly, our propose is to investigate the influence of firm specific factors on medium-sized firms (MSFs) international involvement patterns. The research has managerial implications insofar as it identifies how firm characteristics impinge upon international operations levels and modes. Empirical work is based on a survey of 241 Portuguese MSFs. Portugal appears to be an interesting country to study, since Portuguese firms, while exhibiting a long exporting experience, are still in the early phases of investing abroad.

The paper includes six sections, excluding the present introduction. The first provides a brief literature review on internationalisation processes and entry decisions. Research hypotheses are developed and formulated in the second section, concerning those firm characteristics most likely to influence international involvement patterns. The third section addresses methodological issues, namely data collection, operationalisation of the variables, and statistical tools used. The results of the Ordered

Multinomial Logit regressions undertaken as well as regarding the marginal effects of variables are presented next. The fifth section provides a discussion of the main findings, comparing them with extant literature. The implications of our findings for the development of research on internationalisation processes and determinants are dealt with in the concluding section.

LITERATURE REVIEW

The origins of the internationalisation process perspective date back to Vernon's (1966) "product lifecycle theory". Concerned with the explanation of the post-war upsurge in American investment abroad, he envisaged internationalisation as an incremental process, anchored in both home country and firm specific advantages, and developing along with the product cycle. In spite of the criticisms that may be raised to this approach (see, for instance, Cantwell, 1997) it provides a diachronic perspective on how American firms have increased their international involvement. Later, focusing on the experience of Swedish firms, Johanson and Wiedersheim-Paul (1975) suggested a four-stage process, starting with exports via independent representatives to a final phase of manufacturing abroad. This idea was further developed in the so-called "Uppsala internationalisation model" (Johanson and Vahlne, 1977). Such a model posits a 'stages approach': the firms starts with less risky forms of internationalisation in psychically close markets and gradually increases its commitment and its geographical reach through a process of experiential learning (Johanson and Vahlne, 1977 and 1990; Eriksson *et allii,* 1997).

Similar stages models were presented by Luostarinen (1979), Jarillo and Martinez (1991) and Root (1994), while others authors confirmed these models, more or less thoroughly (Bilkey and Tesar, 1977; Cavusgil, 1980 and 1984; Yaprak, 1985; Rao and Naidu, 1992; Young, Huang and McDermott, 1996, Calof, 1993). The work of Luostarinen is particularly interesting since he inscribed internationalisation in the context of a wider process, labelled the "holistic internationalisation process of the firm", including also inward internationalisation and cooperation. Luostarinen stresses that internationalisation often starts at home, through cooperative arrangements with foreign companies, addressed to the focal firm domestic market (Luostarinen, 1979, Korhonen, Luostarinen and Welch, 1996).

The 'stages approach' has been criticised on several grounds, namely regarding the absence of transaction costs considerations (Anderson, 1993), the declining role of psychic distance (Sullivan and Bauerschmidt, 1990; Beneto and Gripsrud, 1992) and the 'leapfrogging' of stages (Calof, 1993; Calof and Beamish, 1995; Millington and Bayliss, 1990). Petersen and Pedersen (1997), reassessing the criticisms, argue that the

"Uppsala model" was designed to explain foreign market seeking moves and should not be extended to respond other firms' motivations.

We don't concur with Anderson's (1993) comment that the 'stages approach' does not pay enough attention to the strategic capacities of managers, for two reasons. First, the concept of experiential learning assumes the existence of a management capable of distilling earlier experience and replicating it in different contexts. Second, behavioural assumptions regarding managerial decisions are specified in some versions of the "stages approach", namely the concept of "lateral rigidity" (Luostarinen, 1979), which may be envisaged as an hindrance to the translation of experiential learning into specific managerial behaviour.

In this juncture, a bridge may be established between the 'stages approach' and Dunning's (1981) eclectic paradigm, insofar as ownership advantages influence international involvement decisions. Arguing that the eclectic paradigm may be envisaged as an "envelope" that encompasses strategic management theories, and namely the resource-based view, Dunning (2000) underlines that firm's characteristics, resources and managerial orientations do matter[1]. In other words, such characteristics, resources and orientations influence the level and pattern of firms' international involvement.

Other research strands have studied the antecedents of firm internationalisation (for instance, Autio, Sapienza and Almeida, 2000; Martin, Swaminathan and Mitchell, 1998; Tyhanyi *et allii*, 2000; Knight, 2001; Donckels and Aerts, 1998; Leonidou and Katsikeas, 1996; Katsikeas, 1994) as well as the determinants of entry mode selection (Kwon and Hu, 1995; Calof, 1993; Bell, Barkema and Verbeke, 1997; Madhok, 1997; Pan and Tse, 2000; Davis, Desai and Francis, 2000; Arora and Fosfuri, 2000) by looking *inter alia* at firm characteristics. None of these, however, specifically deals with MSFs.

The above review suggests the existence of a missing link here, since the challenges faced by MSFs are different from those of both small firms (like those analysed by Knight, 2001, for instance) and well-established MNEs. Our research is focussed on MSFs and, drawing the "Uppsala internationalisation model" and on Dunning´s wide ranging perspective of ownership advantages, is aimed at identifying the influence of a small group of characteristics and management orientations on international

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[1] See, in a similar vein, Lundan (2002)

involvement patterns, defined by three modal approaches – domestic players, exporters and international investors.

HYPOTHESES FORMULATION

Based on the analysis of theoretical and empirical literature on international business and internationalisation processes, a number of firm characteristics emerge as possible explanatory factors of internationalisation decision and patterns. They concern the following: company size, innovation and product development capabilities, firm strategy, family management, growth commitment, flexibility, cooperative attitudes, and type of activity performed.

Company Size

The relationship between firm size and internationalisation drive has long been a relevant theme for business researchers. Taking a resource-based perspective, size may be envisaged as a *proxy* for stronger resource endowment namely in terms of high skilled people and managerial knowledge. Similarly the eclectic paradigm suggests that firm size may lead to ownership advantages. On the other hand, recent research on instant multinationals indicates that firms may go international since inception (Oviatt and McDougall, 1995; Madsen and Servais, 1997).

Empirical research, however, provides some evidence regarding a positive influence of size on the international involvement. Prince and Dijken (1998) found that firm size, measured in number of workers, discriminated between exporting and non-exporting companies, although without reaching statistical significance. Pan, Li and Tse (1999) indicate that firm size was positively related to higher market shares abroad. Other work in this field, especially concerning the distinction between exporters and non-exporters also identified size as a relevant variable for internationalisation (Whitley, 1980; Katsikeas, 1994; Simões, 1997; Alonso and Donozo, 1996).

Based on these arguments, the following hypothesis can be presented:

Hypothesis 1: Larger firms will exhibit more committed forms of international involvement.

Innovation Capabilities and Strategy

Innovative capabilities have, since Hymer's (1960) contribution, been considered as a relevant factor in explaining investment abroad. Both the internalisation perspective (Buckey and Casson, 1976) and the eclectic paradigm (Dunning, 1981, 1988) have also granted an important role to innovative behaviour in internationalisation. More recently, there is an increasing agreement that some investments abroad are undertaken not only because of superior innovative capabilities but also for enhancing such capabilities (Cantwell, 1989; Cantwell and Janne, 1999; Kuemmerle, 1999; Peng and Wang, 2000).

Sullivan and Bauerschmidt (1990) found that innovative capacity had a positive influence on internationalisation. Product development capacity and differentiation (Leonidou, 1995) may provide specific advantages to be exploited at an international level. The empirical study by Simões, Castro and Rodrigues (2001), on Portuguese firms, also found that product development capabilities were positively correlated with higher level of involvement in international activities.

On the other hand, firms which follow cost based strategies are likely to see internationalisation as a daunting task, since working in foreign markets entails additional costs which lead to shrinking margins (Simões, Castro and Rodrigues, 2001).

It may be suggested therefore that:

Hypothesis 2: *Firms with stronger product development capabilities will exhibit more committed forms of international involvement.*

Hypothesis 3: *Innovative firms will exhibit more committed forms of international involvement.*

Hypothesis 4: *Firms following low cost strategies will show lower levels of international involvement.*

Family Firms

Family companies dominate the business map in most countries, particularly in small and medium sized groups. Various studies have focused on the differences between family and non-family firms with regard to internationalisation (Gallo and Luostarinen, 1991; Welsch, 1991; Donckels and Aerts, 1993 and 1998; Aerts, 1992; Simões, 1997; Simões, Castro and Rodrigues, 2001). In general, they indicate that family fims are mode conservative and therefore less prone to enter international activities. The studies by Aerts (1992) and Dockels and Aerts (1993) on Belgium firms, provide strong

evidence on this regard. However, Simões, Castro and Rodrigues (2001) found that Portuguese family firms, particularly in traditional sectors (such as textile, clothing and footwear), exhibit an above average export orientation.

Putting together the literature reviewed, the following hypotheses may be suggested:

Hypothesis 5a: Family firms will exhibit a lower level of international involvement.

Hypothesis 5b: Family firms with international activity will prefer exporting to investing abroad.

Growth Commitment

Firm growth has traditionally been among the main motives for international expansion. After getting a significant market share in domestic market, firms increasingly look abroad for new opportunities (Czinkota, Ronkainen and Moffet, 1994). Research on export decisions show that firms are stimulated to exploit the potential for extra growth, profits and/or sales resulting from exporting (Weaver and Park, 1990; Leonidou, 1995).

Taking a wider perspective, Pan, Li and Tse (1999) found that early entrants had significantly higher market shares than followers. Simões, Castro and Rodrigues (2001) also refer that the level of importance assigned to growth objectives is related to the involvement on international activities. The saturation of domestic market was among the main motivations identified by Castro (2000) for Portuguese firms to invest abroad.

On the basis of the above analysis, the following hypothesis can be suggested:

Hypothesis 6: Growth oriented firms will present higher levels of international involvement.

Flexibility

Luostarinen (1979), has pointed out that lateral rigidity of managers is one of the main obstacles to internationalisation. He argues that managers tend to follow already known procedures or market servicing modes, since they envisage changes as inherently risky. In particular, he relates the lateral rigidity phenomenon with the lack of knowledge about foreign markets: the lower that knowledge, the stronger the resistance to change. As a corollary of this perspective, it may be argued that flexible and change-adaptive firms will be more likely to operate abroad.

Another relevant dimension of flexibility is product adaptation. Schuit (1994) found that product adaptation capabilities were critical for Dutch firms to successfully internationalise. Other authors (Christensen, Rocha and Gertner, 1987; Sharkey, Lim and Kim, 1989; and Sullivan and Buerschmidt, 1990) identified a positive link between product adaptation and international activity.

In a setting where the World is 'smaller' and time is 'faster', flexibility becomes a key factor not only for supporting the initial internationalisation drive, but also for enabling a successful performance abroad. This leads to the following hypothesis:

Hypothesis 7: The higher firms capability to adapt to change the higher their level of international involvement.

Cooperation

Dunning (1995) has argued that we are entering an age of "alliance capitalism". In fact, firms increasingly rely on cooperative agreements, of different types, to increase there international spread. Narula and Sadowski (2001) has also shown that companies in middle income countries are becoming more and more involved in international alliances. When starting their internationalisation, firms need to identify suitable partners abroad (Kedia and Chokar, 1986; Sullivan and Bauerschimdt, 1990, Buckley, Newbould and Thurwell, 1988; Lane, Salk and Lyles, 2001), in order to get the complementary resources they need, as well as to save time and money.

In some cases, these cooperative arrangements are based on relationships already established in the domestic market (Korhonen, Luostarinen and Welch, 1996; Simões, 1999; Welch *et allii*, 2002). The empirical research by Blomstermo *et allii* (2001) has shown how network relationship experiences may help partner firms to internationalise. Simões (1997) has also found that companies with experience in cooperative arrangements had stronger propensity to internationalise; conversely, the same author also found that the identification of suitable partners was a statistically significant barrier to invest abroad (Simões and Biscaya, 1997).

The above elements lead to suggest that:

Hypothesis 8: The higher firms cooperative orientation, the higher their levels of international involvement.

Type of Manufacturing Activity

It is well known since the pioneering research of the Harvard Multinational Enterprise Project (Vermon, 1972) that industrial sectors exhibit different propensities to internationalise. For instance, advertising intensity and R&D intensity have been mentioned as leading to higher direct investment abroad (Agarwal and Ramaswami, 1992; Erramilli and Rao, 1993; Gatingnon and Anderson, 1988; Pan and Tse, 2000).

Generally speaking, more technology intensive industries display higher levels of investment abroad. However, firms from some intermediate countries are more specialised in traditional industries and enjoy competitive advantages in these sectors. Such advantages are mostly exploited through export and not so much through direct investment. This seems to be the case of Portugal. In fact, Simões, Castro and Rodrigues (2001) found that more than 2/3 of Portuguese companies with foreign sales above 50 per cent of turnover, were in four traditional industries - textiles, clothing, footwear, and wood and cork. However, these sectors only accounted for a small share of firms with investments abroad. Consequently, it may be argued that:

Hypothesis 9a: Companies in traditional industries will exhibit higher export orientation relative to domestic activity.

Hypothesis 9b: Companies in traditional industries will exhibit higher export orientation relative to direct investment abroad.

METHOD

Data Collection

The database used to test the above hypotheses was developed in the context of the EU ADAPT Program. At the European level, the survey was led by CESAG (Centre d'Etude des Sciences Appliqueés à la Gestion of Université Robert Schuman of Strasbourg); in the case of Portugal, the survey was carried out by a team of the CEDE (Centro de Estudos e Documentação Europeia - ISEG), in which both authors participated. The survey was undertaken between September and November 2000.

Companies surveyed employed between 50 and 2000 people. They were active in the following industries: manufacturing, transportation, commerce, construction, and business services. To avoid biases, the survey was restricted to firms with majority Portuguese ownership, and which were not part of a business group.

A sample of 1510 companies were surveyed. Total number of replies was 306. However, following a "quality control" procedure to check the consistence and thoroughness of answers that number declined to 257. This corresponds to a 17,1% response rate, which is very acceptable having in mind the characteristics and dimension of the questionnaire.

Operationalization of Variables

Having in mind the literature on the internationalisation process (Johanson and Wiedersheim-Paul, 1975, Jarillo and Martinez, 1991, Root, 1994, Kwon and Hu, 1995; and Simões and Biscaya, 1997), three levels of firm international involvement were considered: domestic market oriented, export oriented, and investors abroad. This led to define international involvement (INT_INV), the dependent variable, in the following way:

- INT_INV = 0, when the firm has a domestic market orientation, that is, when less than 10% of its turnover was generated abroad and when the firm had no direct investments abroad. There were 154 companies in this group.

- INT_INV = 1, when two conditions were met: at least 25% of turnover was generated abroad, and the firm had no direct investments abroad. 72 companies were included in this group.

- INT_INV = 2, when the firm had undertaken direct investments abroad. There were 15 companies in this group.

This procedure – similar to the one followed by Simões and Biscaya, 1997 – led to discard from the analysis 16 firms. While reducing the size of the sample studied, it has the advantage of excluding those firms which do not have a clear profile of international involvement (without investments abroad and exporting between 10 and 25 per cent of turnover).

Independent variables were defined to enable the test of the hypotheses already mentioned. A synthesis of the operationalisation of these variables, together with the corresponding hypotheses is presented on Table 1.

Table 1 – Independent Variables

Variable	Factor	Operationalisation	Hypothesis
NUM_WOR	Size	Number of workers.	Hyp.1
PROD_DEV	Product Development Capabilities	PROD_DEV = 1, when the firms ranks itself as "very strong" in at least one of a list of product development processes	Hyp. 2
INNO_CAP	Innovative Capabilities	INNO_CAP = 1, when innovation related features were considered as the most important for firm customers.	Hyp. 3
COST_STR	Cost Strategy	COST_STR = 1, when price related aspects were considered as the most important for firm customers.	Hyp. 4
FAM_MAN	Family Management	FAM_MAN = 1, when management is undertaken by family members.	Hyp. 5a e 5b
GROW_OR	Growth Orientation	GROW_OR = 1, when the desire to increase turnover was ranked first or second among firm's strategic goals.	Hyp. 6
ADAP_CHA	Capacity to Adapt to Change	ADAP_CHA = 1, when the capacity to adapt to change was considered as a firm advantage against bigger competitors.	Hyp. 7
EST_PART	Propensity to Establish Partnerships	EST_PART = 1, when the capacity to develop parterships and to become involved in networks was considered as a firm advantage against bigger competitors.	Hyp. 8
NACE	Traditional Manufacturing Industries	NACE = 1, when firms main activities were in textile, clothing, footwear or wood and cork industries.	Hyp. 9a e 9b

Model Presentation

The econometric model used to analyse data was the Ordered Multinomial Logit. This model seems to be more appropriate than the traditional multinominal logit or probit models for the analysis of dependent variables assuming various ordered categories or hierarchies (Greene, 1993; Maddala, 1983). In the present exercise, the dependent variable can be envisaged as ordinal, as each company can assume one of three categories of increasing international involvement: domestic market orientation (INT_INV = 0), export oriented (INT_INV = 1) or investor abroad (INT_INV =2).

The model is built around a latent regression, in the same way of the binominal probit model, assuming that a latent variable yi* is being estimated - in the present model, INT_INVi* -, that depends linearly on the various independent variables x, so that:

$$INT\_INV_i^* = x_i'\beta + \varepsilon \, ,$$

where ε represents the aleatory variable. The category observed for *INT_INV$_i$* is based on *INT_INV$_i$**, according to the following rule:

$$INT\_INV_i = \begin{cases} 0 & \text{if} \quad \text{INT\_INV}_i^* \le \gamma_1 \\ 1 & \text{if} \quad \gamma_1 < \text{INT\_INV}_i^* \le \gamma_2 \\ 2 & \text{if} \quad \gamma_2 < \text{INT\_INV}_i^* \end{cases}$$

The values assumed by the γ′s are not defined by the user, being instead estimated simultaneously with the β's. It should also be acknowledged that, in this type of models, bigger values in terms of category, correspond to bigger values for the latent variable, so that

INT_INV$_1$ < *INT_INV$_2$* implies that *INT_INV$_1$** < *INT_INV$_2$**.

Thus the probabilities of observing each one of the *INT_INV$_i$* values are given by:

$$\Pr(INT\_INV = 0 \mid x, \beta, \gamma) = F(\gamma_1 - x_i'\beta)$$
$$\Pr(INT\_INV = 1 \mid x, \beta, \gamma) = F(\gamma_2 - x_i'\beta) - F(\gamma_1 - x_i'\beta)$$
$$\Pr(INT\_INV = 2 \mid x, \beta, \gamma) = 1 - F(\gamma_2 - x_i'\beta)$$

Where F is the cumulative distribution function of ε. Parameters arte calculated by the maximum likelihood method.

RESULTS

The results of the Ordered Multinomial Logit regressions carried out to test the hypotheses formulated are presented on Table 2. The models are very satisfactory. All of them exhibit highly significant chi square levels ($\chi^2 = 0.0000000$), with 16 to 17 iterations completed. The percentage of correctly classified situations is acceptable, around 69 per cent for all models.

Table 2 – Results of the Ordered Multinomial Logit Simulations

	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	-1.4027**	-1.4043**	-1.5438***	-1.3568**	-1.4069***
NUM_WOR	0.0014***	0.0014***	0.0015***	0.0014***	0.0015***
PROD_DEV	0.8499**	0.8480**	0.8540**	0.8731**	0.8922**
INNO_CAP	-0.0268		-0.0428	-0.0405	
COST_STR	-0.9956***	-0.9925***	-1.0023***	-1.0034***	-0.9899***
FAM_MAN	-0.1929	-0.1934		-0.1996	
GROW_OR	-0.0503	-0.0497	-0.0346	-0.0370	
ADAP_CHA	0.1077	0.1086	0.1199		
EST_PART	0.4230	0.4222	0.4377	0.4473	
NACE	1.6162***	1.6148***	1.5826***	1.6166***	1.5305***

	Model 1	Model 2	Model 3	Model 4	Model 5
Chi square	57,4	57,4	57,0	57,3	54,9
Well classified situations	69,3%	69,7%	68,9%	69,3%	68,5%

*Level of Significance 0.10;   **Level of Significance 0.05   ***Level of Significance 0.01
N=241

The Ordered Multinomial Logit also enables to identify the marginal effects of each explanatory variable on the dependent variable. Such an exercise facilitates the interpretation of variable behaviour for each form of international involvement considered. This is particularly helpful for statistically significant variables; for non-significant ones, he interpretation should be done with caution, even though the real signs are presented. The results of this exercise are presented on Table 3, referring to the marginal effects of variables included in Model 1.

Table 3 –Marginal Effects for the Three Levels of International Involvement (Model 1)

Variables	INT_INV=0	INT_INV=1	INT_INV=2
Constant**	0.3104	-0.2600	-0.0505
NUM_WOR***	-0.0003	0.0003	0.0001
PROD_DEV **	-0.1881	0.1575	0.0306
INNO_CAP	0.0059	-0.0050	-0.0010
COST_STR***	0.2203	-0.1845	-0.0358
FAM_MAN	0.0427	-0.0357	-0.0069
GROW_OR	0.0111	-0.0093	-0.0018
ADAP_CHA	-0.0238	0.0200	0.0039
EST_PART	-0.0936	0.0784	0.0152
NACE***	-0.3577	0.2995	0.0581

*Level of Significance 0.10;   **Level of Significance 0.05;   ***Level of Significance 0.01
N=241

Taking this path, a comparison between the marginal effects of three levels of firm internationalisation considered - domestic companies (DOM), exporting companies

(EXP), and companies with direct investment abroad (FDI) - can be undertaken. Such a comparison enables to better test the hypotheses where non gradualist behaviours are assumed. The results, concerning Model 1, are exhibited on Table 4.

Table 4 – Comparison of Marginal Effects (Model 1)

Variables	EXP vs DOM	FDI vs DOM	FDI vs EXP
Constant**	-0.5704	-0.3609	0.2095
NUM_WOR***	0.0006	0.0004	-0.0002
PROD_DEV **	0.3456	0.2187	-0.1269
INNO_CAP	-0.0109	-0.0069	0.004
COST_STR***	-0.4048	-0.2561	0.1487
FAM_MAN	-0.0784	-0.0496	0.0288
GROW_OR	-0.0204	-0.0129	0.0075
ADAP_CHA	0.0438	0.0277	-0.0161
EST_PART	0.172	0.1088	-0.0632
NACE***	0.6572	0.4158	-0.2414

*Level of Significance 0.10;　**Level of Significance 0.05;　***Level of Significance 0.01
N=241

DISCUSSION

The results strongly suggest that higher levels of international involvement by Portuguese MSFs are positively associated with size (NUM_WOR), product development capabilities (PROD_DEV), and traditional industries (NACE), and negatively with cost based strategies (COST_STR). These general findings deserve however further analysis, since in some cases the hypothesised 'leap' from exporters to investors abroad does not hold.

The first hypothesis indicated a positive relationship between firm size and international involvement. For all models included in Table 2, NUM_WOR was significant at 0.01, thus confirming the hypothesis. Our findings corroborate the results of previous research on this issue (Whitley, 1980; Katsikeas,1994; Simões, 1997; Pan, Li and Tse,1999). A closer look at Tables 3 and 4 shows, however, that the marginal effect of NUM_WOR on the choice between FDI and exporting is slightly negative. This indicates that the growth of exporting firms, in terms of employment, does not necessarily lead to investing abroad. A possible explanation is the perceived existence of domestic country location advantages, which act as a countervailing force against investing abroad. In fact, Simões (1997) found that Portuguese companies still considered Portugal as the preferred manufacturing location. In theoretical terms, this finding suggests that firm characteristics alone may not be enough for explaining investment abroad, indirectly confirming the arguments behind the eclectic paradigm.

Although with lower significance levels (0.05), the behaviour of PROD_DEV confirms Hypothesis 2. In fact, it seems that stronger product development capabilities generally lead to more committed forms of international involvement. This is in line with prior empirical studies, namely those of Leonidou (1995) and Schuit (1994). But the comparison of marginal effects shows again a negative sign in the arbitration between exports and FDI. Our interpretation is similar to the one indicated above: firms envisage manufacturing abroad as a risky step, and therefore, producing at the 'home turf' is still preferred.

Unexpectedly, INNO_CAP exhibits a negative sign. Although without reaching statistical significance, data runs counter to Hypothesis 3 and most of the literature on internationalisation. A possible explanation may be that the definition of INNO_CAP is not specific enough. It should be recalled that INNO_CAP was defined as a *dummy*, reaching 1 when one of the items related to innovation were referred as the most important for firm customers. This may simply indicate that the firm is becoming aware of innovation challenges, but such awareness may not be fully translated in in-house capabilities and behaviour. A further possibility is that the effects of INNO_CAP were captured by the other variable related to innovation – PROD_DEV; in fact, the deletion of INNO_CAP from the model does not affect neither chi square nor well classified situations indexes.

Hypothesis 4 indicated that companies following low cost strategies, would present lower levels of international involvement. This hypothesis gets a very strong support from the Ordered Multinomial Logit simulations displayed in Table 2: COST_STR exhibits a negative sign and is significant at 0.01 for all models. This is consistent with theoretical expectations as well as with prior research on the international behaviour of Portuguese firms (Simões, Castro and Rodrigues, 2001). Again, the analysis of marginal effects confirms the expected behaviour for the comparisons exporters *versus* domestic and investors abroad *versus* domestic, but not for investors *versus* exporters. This may be due to the same phenomenon identified above: there are external factors acting as barriers for MSFs to invest abroad, thereby strengthening managers' lateral rigidity. A further explanation may be associated with the time needed for switching stages or, in other words, to 'internalise' international experience. Of course, the solution of this puzzle will require further research, that is outside the scope of the present paper.

The negative influence of family management on international involvement (Hypothesis 5a) is not statistically confirmed, although the variable FAM_MAN carries the expected sign. Similarly, Hypothesis 5b is not supported since the comparison of marginal effects of foreign investors *versus* exporters provides a very low coefficient. Therefore, contrary to other authors (Welsch, 1991; Donckels and Aerts, 1993 and

1998) we were not able to find sound empirical evidence indicating a more conservative behaviour of family firms.

The findings regarding the influence of growth commitment (Hypothesis 6) are surprising. GROW_OR did not achieved statistical significance and did not exhibit the expected positive sign. This is hard to explain, since extant literature concurred in indicating growth commitment as a key driver behind increased international involvement (Leonidou, 1995; Simões, 1997; Pan, Li and Tse, 1999; Castro, 2000). Three possible explanations may, however, be suggested in this regard. First, the survey was carried out in a period when domestic market was still growing, so that selling abroad was not perceived by many firms as a condition to respond firm growth objectives. A second, and complementary point, is associated with the characteristics of the firms surveyed: these are MSFs which most probably did not perceived their domestic markets shares close to a ceiling that might inhibit further growth. Finally, it may happen that some more successful growth-oriented reached a size that makes them no longer MSFs.

Hypotheses 7 and 8 are not confirmed. ADAP_CHA and EST_PART, although exhibiting the expected sign, do not reach statistical significance. While showing a positive association to international involvement, flexibility and cooperative drive are not determinants of international involvement, at least on the basis of the information collected in our research.

Instead, sectoral influence on MSFs internationalisation was found to be very strong and in accordance with Hypotheses 9a and 9b. The results presented on Table 2 show that, in general, firms in traditional industries tend to be significantly more internationalised: NACE variable has a positive sign and is statistically significant at 0.01. Confirmation of Hypotheses 9a and 9b requires however a look at marginal effects. As expected, companies in traditional industries have a high positive probability to be exporters and a negative one to be domestic, thus supporting Hypothesis 9a. Although a positive probability was also found for investors abroad, it is clearly lower than that exhibited by exporters (coefficients of 0.0581 and 0.2995, respectively), what leads credence to Hypothesis 9b. This is a very interesting finding since, at first sight, it seems to run counter the well founded prescription that internationalisation is stronger in more technology advanced industries. In our opinion, such findings confirm that home country factors, and advantages, strongly impinge upon firm internationalisation profiles, especially in the early stages. Nevertheless, as Simões, Castro and Rodrigues

(2001) argued, only those firms with relevant internal capabilities were able to profit from the above factors to engage into more committed modes of operation abroad.

CONCLUDING REMARKS

Our exercise shows that the main determinants of international involvement by Portuguese firms are related to firm size, type of industry, strategy and product development capabilities. These determinants have, however, a stronger influence on the export decision than on investing abroad. This raises interesting challenges for international business research.

A major topic is associated with the relevance of the 'stages model'. The findings confirm to some extent the existence of a gradual involvement process in international business, as the model suggests. However, a 'mechanistic' perspective that exporting automatically leads to investing abroad is not warranted. In fact, the transition from exports to investment abroad seems to face several hurdles, both internal and external. At firm level, the findings suggest that the drivers behind the early phases of internationalisation (exporting) may not fully hold for later phases, as the decline in explanatory power of several variables indicates. At a wider level, it appears that firm behaviour is not due to firm specific factors alone; in particular, the attractive power of domestic conditions may influence involvement decisions. In this vein, location factors need to be taken into account when identifying the determinants of internationalisation. In eclectic paradigm parlance, ownership advantages are not enough to explain internationalisation moves; location factors should also be taken into account.

The research approach followed in this paper has the merit of focusing on a particular size group (MSFs), enabling to better understand the specific factors behind their internationalisation. It has, however, several limitations. One regards the categorisation of firms in three groups only, thus making the analysis too generic. Another concerns the distorting effect of defining borders to firm size: it may happen that some successful exporting firms, while growing and investing abroad, reached a size too large to be still included in the MSFs group. Slicing the reality may, as Henry Mintzberg has pointed out, lead to lose the perspective of the whole.

The above comments lead directly to the implications for further research. There is undoubtfully a need for further research on firm internationalisation processes. In this endeavour a more eclectic approach seems to be preferable. Our findings indicate that firm specific factors alone do not fully explain internationalisation behaviour. Those

factors should be combined with other elements. Similarly, cross-section analysis does not enable to fully capture internationalisation processes. It needs to be complemented with longitudinal case studies, which may identify how challenges and the importance of key variables change as the internationalisation process develops.

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