HOW FAMILY FIRMS GROW FOOTLOOSE:

INTERNATIONAL SUBCONTRACTING AND FOREIGN DIRECT INVESTMENT

AS A DUAL STRATEGY TO EXPAND ABROAD

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Abstract

To date, little empirical research has been conducted to investigate the propensity of family businesses to internationalise their operations through international subcontracting and direct investment abroad. This paper aims to contribute to fill this gap using primary data collected from a sample of 90 Italian manufacturing family firms based in three industrial districts. Our findings reveal that export experience, innovative capabilities and stable relationships with other firms via shareholdings and cooperative agreements are significantly and positively associated with family firms' propensity to internationalize their operations through international subcontracting and FDI. In addition, we found that firm's age and positioning in the business filière have an influence, being younger and commissioning family firms more likely to engage in riskier international strategies. Finally, our findings do not support the hypothesis that family involvement inhibits firm's investment in international strategies. The implications of the findings for family business research and the international business literature are discussed.

Key words: family firm, international expansion, FDI, international subcontracting

1. Introduction

Increasing globalization has forced firms of all sizes and ownership types to expand their international operations (Zahra, 2003). However, while previous research on internationalization has focused primarily on large corporations and new ventures (Caves, 1982; Barlett and Ghoshal, 1989; Cantwell, 1998), studies on the internationalization process of family firms are still sparse. As noticed by several scholars, this gap contrasts with the economic relevance of family firms, especially small and medium sized ones, which still constitute the majority of firms in the world economy (Leenders and Waarts, 2003). Indeed, Dyer estimated that as many at 90% of all companies, worldwide, can be classified as family firms (Dyer 2003).

Until few decades ago, the family firm was considered by traditional economists a transient organizational form prevailing in the initial stage of a company life cycle and destined to evolve in the managerial form to allow for high rate of growth and profitability (Casson, 2000). In this view, the family firm is typically portrayed as small to medium sized, slow growing, characterized by a flat and centralized organizational structure, relying upon self-financing and internal succession mechanisms, often strongly rooted in favourable local contexts (e.g. industrial districts and clusters), implicitly backward with respect to production technology and international expansion and less profitable than managerial businesses (Colli, 2003; Cafferata and Mensi, 1995).

Recent research has demonstrated that this portrait is not adequate to capture the strategic behaviour of an increasing number of real world family firms. In Italy, Benetton, Luxottica and Natuzzi are just three of the most well known examples of dynamic and highly performing family firms which have rapidly acquired world wide

reputation by pursuing strategic and organizational innovation, international expansion and growth. However, increasing international orientation is becoming a wider phenomenon among Italian family firms that cannot be confined to a few exceptional examples of over-performing companies. The traditional internationalisation pattern characterized by the divergence between the very good export performance of Italian firms, especially family SMEs, and their weak and delayed multinational growth (Mariotti, 2004) showed a dramatic turnaround in the last two decades. Since the 1990s the process of internationalisation is more and more concerned with SMEs operating in scale-intensive and traditional sectors, investing in the EU, Eastern Europe and Far East. The emergence of small family owned multinationals represents a significant transformation in the Italian economy, emphasizing the need of a deeper understanding of the driving forces of family firm internationalisation and the forms that it takes.

This paper aims to contribute to fill this gap by examining the influence of a firm's resource endowment on the likelihood of a family business to internationalise operations through international subcontracting and direct investment abroad. Specifically, we model the international involvement pattern of family firms as a process which may assume three different modalities implying an increasing level of risk. We model firms' decisions to carry out (i) neither international subcontracting nor FDIs, (ii) only international subcontracting and (iii) both international subcontracting and FDI. International subcontracting and FDI are not considered as mere transfer of capital, but complex bundles of management, technology, market access and capital money. The focus on international subcontracting and FDI has both practical and theoretical significance, and has been neglected by previous research, which has mostly

focused on the exporting orientation and foreign market entry modes of SMEs and family business.

The focus on resource endowment as the key driver for family firms' internationalisation is consistent with the international business literature, which posits that the basis of internationalisation is to have different types of resources that allow the firm to expand outside national borders. Knowledge accumulation, organizational and managerial capabilities, financial resources, and international orientation are generally considered the main drivers that enable large and established firms to expand abroad, but family firms are generally poorly positioned to obtain these resources, particularly in the case of small companies (Fernández and Nieto, 2005).

Accordingly, we examine the most influential factors/resources that favour family firms' propensity to engage in increasingly risky and complex modes of internationalisation. To do so, we have used primary data collected from a sample of 90 Italian manufacturing family firms based in three industrial districts.

The article is organized as follows. The next section contains a review of the problems faced by family firms as regards internationalization, which leads us to the formulation of the research hypotheses. Section 3 accounts for the data collection procedure and the sample characteristics. Section 4 outlines the operationalisation of the variables as well as the statistical analyses applied to the data set. The specification of the model and the findings of the data analyses are reported and discussed at the end of the section . The main conclusions of the study make up the final section 5.

2. Theoretical background and research hypotheses

2.1 Family ownership and control

Several studies have focused on the differences between family and non-family firms with regard to internationalisation (Gallo and Sveen, 1991; Welsch, 1991; Gallo and Pont, 1996; Donckels and Aerts, 1998). In general, they indicate that family firms are less prone to enter international activities. Family firms have indeed a number of peculiar features which affect the way family firms define, address, and coordinate business objectives (Corbetta and Montemerlo, 1999; Corbetta and Salvato, 2004) and which are relevant to explain their willingness to expand abroad and the specific modes of internationalisation that they can choose (Zahra, 2003).

Family firms are generally considered more conservative in their policy of investment and growth. The possible conflict between family and business objectives and interests can indeed reduce the firm's propensity towards risk taking. Carney (2005) argues that the family members control on the firm's assets and decision making inhibits the firm's investment in resources and growth strategies because of the family members' tendency to be overly concerned with wealth preservation. In this view, the family objective of wealth preservation may conflict with the business objective of growing abroad. Internationalization is indeed a particularly risky strategic move that may take years to generate profits, depriving the family of short-term wealth. Further, internationalization usually requires additional capabilities and resources which may alter the firm's labour force, values and organizational culture (Zahra and Garvis, 2000) in contrast to the owner-manager's tendency to keep full control on the firm's operation. However, recent research does not provide clear evidence in this regard. Fernández and Nieto (2005) found that family ownership has a negative impact on international involvement measured in terms of export propensity. In contrast, by applying the

stewardship perspective, Zahara (2003) found that the percentage share of family ownership in the business and degree of family involvement in the firm are positively related to its level of internationalization. Although the empirical findings offer contrasting evidence as regards the effect of family involvement on a firm's propensity towards internationalisation, we argue that the presence of external managers may increase the family firm's endowment of strategic and management capabilities, which should in turn favour the firm's propensity towards international growth. We argue that this might be especially true when international expansion does not involve exclusively export propensity but involves the adoption of more complex forms, such as the management of an international supply network and the establishment of foreign production sites. Therefore we posit the following:

> HP1: Family management is negatively associated to a family firm's
>
> propensity to engage in a higher risk international strategy based
>
> on the adoption of international subcontracting and FDI.

2.2 Firm's size

Size is one of the structural features which can affect firms' willingness to expand their operations abroad (Bonaccorsi, 1992). Indeed, although there are several large family firms, the prevailing numbers of family businesses are still SMEs. From a resource-based perspective, size is considered a proxy for stronger resource endowment, in terms of financial, technological, organizational and human resources, including the managerial knowledge which firms need to internationalize their operations intensively (Zahra, 2003). Another explanation (not necessarily alternative) emphasizes the

relationship between company size and risk profile. Large companies are generally considered less risk averse than small companies and can assume greater (foreign) market risks (Petersen and Pedersen, 1999). In this view, small and medium sized family firms should encounter greater difficulty to grow internationally compared to larger firms, especially for undertaking high commitment international strategy, such as wholly owned subsidiaries (Petersen and Pedersen, 1999). Empirical research concerning the distinction between exporters and non-exporters has identified size as a relevant variable for internationalisation (Whitley, 1980; Moen, 1999; Katsikeas, 1994; Prince and Dijken, 1998; Simoes and Crespo, 2002). Based on these arguments we posit the following:

> HP2: A firm's size is positively associated with a family firm's
> propensity to engage in higher risk international strategy based
> on the adoption of international subcontracting and FDI.

2.3 International experience

Proponents of the stage theory (Johanson and Wiedersheim-Paul, 1978; Bilkey and Tesar, 1977; Johanson and Vahlne, 1977) have suggested a generally positive relationship between the firm's knowledge of foreign markets and the pace of the firm's resource commitment to these markets. This theoretical approach proposes that firms go through sequential internationalisation stages beginning with sales to the home market and irregular exports. This is followed by regular export via agents and subsequently by the establishment of sales subsidiaries. At a later stage, firms invest equity in offshore production sites. The stage approach is considered a useful model to study the

internationalization of family SMEs in consideration of the structural limitations of this type of firm. In this view, the limited resource base of family SMEs implies that the process of being involved in foreign activities in terms of export, manufacturing and R&D investments must be gradual and executed in incremental steps over a long period of time (Boter and Holmquist, 1996).

Empirical research offers contrasting results in this regard. While some studies have confirmed the empirical validity of the stage theory, other studies have found opposite findings. In a study of small companies, Gandemo and Andersson (1993) found no evidence that the decision to invest in a foreign country is a step following a previous decision to export in that country. Other scholars propose that a difference exists in the internationalisation pattern of innovative SMEs and SMEs operating in traditional manufacturing industries. However, many SMEs in traditional manufacturing industries are forced to internationalise early in their development and may not be able to wait for stages to evolve (Oviatt and Philipps McDougall, 1994; Oviatt and McDougall, 1997), especially if they are in globalized industries and, frequently, if the size of their domestic markets is small (Bradley et al., 2006). Thus, the business environment of a particular industry and its implications for strategy may countervail the firms' inclination to cautious, incremental behaviour. In particular, the pressure from global competitors may reduce or even exclude incrementalism (Petersen and Pedersen, 1999).

Given these contrasting results, we assume that the acquisition of international knowledge through export experience may reduce firms' aversion to risk, favouring their international involvement through international subcontracting and FDI. However, we posit that incremental international involvement should not be conceived as a strict

stage process requiring that the decision to subcontract and/or invest in a foreign country is necessarily a step following a previous decision to export in that country. Therefore we posit the following:

HP3a: Export propensity/intensity is positively associated to firms' propensity to engage in international strategies implying an increasing risk exposure through the use of international subcontracting and/or FDI.

HP3b: The engagement in international strategies implying an increasing risk exposure through the use of international subcontracting and/or FDI in foreign countries does not require exporting to these countries.

2.4 Innovation capabilities

Since Hymer's contribution, innovative capabilities have been considered a relevant factor in explaining investment abroad. Both the internalisation perspective (Buckey and Casson, 1976) and the eclectic paradigm (Dunning, 1981) have also granted an important role to innovative behaviour in internationalisation. 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 a higher level of

involvement in international activities. Further, with specific reference to family business, Eddleston et al. (2008) found that innovative capacity is critical for family firms to compete effectively. Based on this evidence, we expect that firms with stronger innovation capabilities will exhibit more committed forms of international involvement, such as FDI (Petersen and Pedersen, 1999).

>Hypothesis 4: Firms with stronger innovation capabilities will exhibit more committed and riskier forms of international involvement combining international subcontracting and FDI

2.5 Ownership ties and networking

As noticed by Fernández and Nieto (2005), apart from generating resources internally, the family firm can obtain them from other companies through stable relationships with other firms. These relationships can take the form of shareholdings—leading to the emergence of business groups—or cooperation through strategic alliances with other independent firms.

Shareholdings in other companies provide accessibility to technological capabilities, human resources, marketing expertise, or commercial channels held by other firms, thus amplifying the resource base of the single firm. Furthermore, shareholding in other companies requires the family firm to acquire more professional and systematized management capabilities, which can be proficiently used also to manage an international supply network and/or to coordinate distant production sites.

Hypothesis 5a: Riskier international involvement patterns are favoured

when the family SME holds shareholdings in other companies.

Social networking may influence a firm's ability to identify and acquire the necessary information and knowledge to undertake international expansion, helping family firms, especially SMEs, to overcome the constraints due to their limited internal resource base. The range of collaborative partners and the density of network relations may significantly reduce family firms' liability of 'foreignness'. This approach seems to provide a useful perspective, especially in the context of firms rooted in industrial districts and clusters which are embedded in particularly dense business and social networks. Stable cooperation with other companies favoured by social, cultural and geographical proximity provides useful information about business opportunities, foreign market characteristics, obstacles or problems involved in the process, and so forth, and the perceived risk is lowered as a result (Bonaccorsi, 1992). Westhead, Wright, and Ucbasaran (2001) state that businesses managed by founders with more far-reaching information and contact networks are significantly more likely to export. Accordingly, Fernández and Nieto (2005) predicted and found a positive contribution to international involvement through SME alliances and agreements when using the dimension of export behaviour. Thus, we postulate the following hypothesis:

Hypothesis 5b: Riskier international involvement patterns are favoured

when the family SME has alliances with other firms.

3. Methods

3.1 The research context: data collection and sampling

Considering the fact that firms immersed in the industrial district atmosphere benefit from numerous advantages (e.g., specialisation, scale economies, knowledge flows, cooperative relationships) which could potentially moderate the liabilities of foreignness (Beamish and Lu, 2001), we selected a sample of firms from a pool archive derived from three distinct Italian industrial districts: (i) Montebelluna (sport-shoes and sportswear), (ii) Verona (walking shoes) and (iii) Vibrata Valley (clothing).

In each setting the field work was conducted over a period of eight months using several data collection techniques. At the first stage, we collected documents and conducted in-depth semi-structured open-ended interviews (10 interviews in each district, 30 in total) with key informants and local institutional actors.

At the second stage, a survey was carried out through face-to-face in-depth interviews on the basis of a semi-structured detailed questionnaire. We selected a stratified sample of 30 family firms in each district (table 1) in order to represent all the different phases of the district production chain. Interviewed companies included final firms and subcontractors, leading firms and followers. In this paper, a firm is considered a family business when its ownership and/or management are concentrated within a family (Handler, 1989; Litz, 1995; Morris et al., 1997; Leenders and Waarts, 2003).

====== Insert Table 1 about here =======

Sampled firms were identified using databases, personal contacts and institutional sources of information. The questionnaire's sections covered a number of relevant areas

of investigation, such as: (a) company background and internal organisation; (b) innovative activity and sources of knowledge; (c) linkages with local and external subcontractors/client firms; (d) horizontal linkages with district firms and institutions; (e) internationalisation. Four specialized interviewers (including the two authors) carried out the survey and the questions were addressed to the owner or general manager of the firm or, if this was not possible, the person to whom the manager had delegated his powers and duties. Fieldwork was conducted during the spring and fall of 2003. Interviews lasted on average about two hours.

3.2 Measures

3.2.1 The dependent variable

We are interested in explaining the international involvement patterns of family firms through FDIs and subcontracts, i.e. the firm's decision to carry out (i) neither subcontracts nor FDIs, (ii) only subcontracts and (iii) both subcontracts and FDIs or only FDIs, where a natural ordering of these internationalisation strategies can be assumed on the basis of their intrinsic risk. We assume, in accordance with the literature discussed above, that the three alternatives imply an increasing exposure of the firm to risk and, thus, to the liability of foreignness, since they are associated with an increasing amount (and degrees of irreversibility) of the firm's resources that must be committed to the international expansion strategy. Thus, the dependent variable that our model tries to explain is the propensity of the firm towards internationalisation.

We built the following dummy variables:

- PSUBC, which is equal to 1 if the firm has established subcontracts in CEECs and 0 otherwise; and

- PFDI, which is equal to 1 if the firm has established FDI in CEECs and 0 otherwise.

The combination of these two dummies identifies the firm's internationalisation pattern in CEECs:

(i)   PSUBC=0 and PFDI=0,

(ii)   PSUBC=1 and PFDI=0,

(iii)   PSUBC=1 and PFDI=1, or PSUBC=0 and PFDI=1.

3.2.2 Independent variables

Family management

We divide family firms into two categories according to the absence or presence of external managers in the management of the firm. Thus, this is a dichotomous variable that assumes value 1 for family firms where all managerial positions are occupied by family members and value 0 for family firms where one or more managerial positions are occupied by managers external to the family (FAMMAN).

Firm size

A firm's size (SIZE) was measured both through the number of employees (Fernández and Nieto, 2005) and with its squared value, because it is likely that the impact of size, if there is one, is not constant but decreasing with its level. This transformation is equivalent to the "natural log of full-time employees" used in past research (e.g., Davis and Harveston, 2000). We have also used turnover as an alternative measure, but results

did not change. However the variable SIZE will be omitted in the final model presented because of problems of collinearity.

International experience

Three independent variables were used in the study to assess the degree of international experience of the firm. The first two are the firm's export propensity and intensity, which are two well-established measures of export firm performance (Bonaccorsi, 1992; Calof, 1994; Wakelin, 1998; Fernández and Nieto, 2005). We indeed assumed that exporting firms can acquire important knowledge of the international environment and process through their commercial involvement in international markets, which can be used proficiently to evaluate better the costs and risks associated with other forms of internationalisation. The third variable identifies family firms that export in CEECs, that are the target countries of international subcontracting and FDIs undertaken by the sampled firms. Thus, the three measures used in the study to capture the firm's international experience are the following:

- *Export Propensity*: this is a dichotomous variable indicating whether the firm is a non exporter, that is, export sales are equal to zero, or an exporter, that is, all other cases (PEXP).

- *Export Intensity*: measured by the ratio of export sales to total sales (INTEXP).

- *Export Propensity in CEECs*: this is a dichotomous variable indicating whether the firm does not export in CEECs, that is, export sales in CEECs are equal to zero, or an exporter in CEECs, that is, all other cases (PEXPCEEC).

Innovation capabilities

The firm's innovation capabilities were measured by two independent variables:

- *Patents Propensity*: this is a dichotomous variable that indicates whether the firm has registered any patents abroad. If the firm has registered a patent abroad in the last three years, the value of the variable is one, if not, it is equal to zero (PPAT).

- *Patents Intensity*: measured by the number of patents registered abroad (INTPAT).

Shareholding in other companies

This is a dichotomous variable that indicates if the family firm has control over other enterprises through shareholdings (CONTR).

Cooperative agreements with other companies

This is a dichotomous variable that indicates if the family firm has formal or informal cooperative agreements with other enterprises (COOPAG).

3.2.3 Other control variables

Age

In the literature (Davis and Harveston, 2000; Zahara, 2003), it has been maintained that established firms were more likely to gather information about international operations and to build the infrastructure needed for internationalization. Therefore, the analysis controls for firm age (AGE), measured by the years a firm has been in existence.

Type of Firm

Analyses also control for firm type, using dummy coding (COMMIS). Commissioning family firms and subcontracting firms in the sample (these last ones are firms producing components or final products for commissioning firms) were coded 1 and 0, respectively. It is reasonable to assume that firms being able to collocate their product

on the market are placed in a better position to gain knowledge and information on the international environment.

Industrial district

Analyses also controlled for the firms' geographical location using dummy coding. Indeed, the three industrial districts selected in this study show pronounced differences in terms of performance and growth in both domestic and international markets. Some authors have argued that, besides a firm's specific characteristics, the firm external environment could influence the use of internal resources (Rugman and Verbeke, 2003), affecting the ability to identify and exploit the opportunities linked to international growth (O'Farrell et al., 1998a, 1998b). Therefore, we have introduced three dummies to control for geographical location in the Montebelluna, Vibrata Valley and Verona district, respectively (MONTEB, VALVIB, VERONA).

The operationalisation of all variables included in the study is summarized in Table 2.

====== Insert Table 2 about here ======

Descriptive statistics (mean and standard deviation) and correlation coefficients of the analysed variables are reported in Table 3. It shows that the interviewed firms are mainly family managed, exporters and final firms. The average firm size is 74 employees, and the average age of the firm is 24 years. We observe a significant level of correlation among almost all pairs of variables. As regards internationalisation, IS subcontracting is mainly correlated with final firms and patents, while FDI is mainly correlated with the propensity and the intensity to export.

====== Insert Table 3 about here ======

4. Estimation strategy and results

4.1 Specification of the model

In order to identify the key factors in international involvement patterns of family firms through FDIs and subcontracts, we estimate an ordered probit model for the firm's decision to carry out (1) neither subcontracts nor FDIs, (2) only subcontracts and (3) both subcontracts and FDIs or only FDIs [1]. In our probit model a natural ordering of the internationalization strategies can be assumed on the basis of their intrinsic risk.

The basic framework is a regression model for the latent variable y*, denoting the firm's propensity to expose itself to the risk of internationalisation in CEECs:

$$y^* = \beta^T x + \varepsilon,$$

where the disturbance ε is assumed to be normally distributed across observations [2]. What we do observe is the behaviour of the firm in CEECs: *y*. This variable can assume three values according to the firm's decisions described above. The level of the firm's propensity to risk (*y**) determines its strategy towards internationalization in CEECs:

$$y = 0 \quad \text{if } y^* \le \mu_1 \qquad (1),$$

$$y = 1 \quad \text{if } \mu_1 \le y^* \le \mu_2 \qquad (2) \quad \text{and}$$

$$y = 2 \quad \text{if } \mu_2 \le y^* \qquad (3).$$

This is a censoring model, where the unknown thresholds μs are also to be estimated along with the vector β.

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[1] Although more correct from the logic point of view, firms involved exclusively in FDIs are not treated separately from firms employing a dual strategy because of small sample size in the first case (cf. Table 4).

[2] The model can also be estimated with a logistically distributed disturbance. In general and in our case as well, this choice does not produce any substantial difference.

====== Insert Table 4 about here ======

In the following, we will report the values estimated for β by including the firm specific factors discussed in the previous sections among regressors.

As we have already observed, we drop the variable SIZE (the number of employees) because it generates collinearity problems owing to the small number of sampled firms. Specifically, we observe a high correlation between SIZE and all variables measuring innovation. Unfortunately, it was not possible to carry out a principal component analysis because of the large proportion of zeroes for variables, like the number of patents or the amount of budget allocated to R&D. Therefore, the little variation among these variables prevents us from disentangling the separate effect of "firm dimension" and "innovation".

We also cannot examine the effect of context-specific factors by inserting the dummies for the three clusters, because the inclusion of the cluster dummies generates collinearity problems, being highly correlated with the innovation at the firm level. Let us consider, for instance, the number of firms with patents: they are mostly located in Montebelluna; only three firms have registered patents in Verona and there are no firms possessing patents in Valvibrata[3].

However, in the phase of estimation, we will adjust standard errors for the heteroskedasticity and correlation of the error term induced in the model by the clustering of the firms, via the Huber-White formula, which assumes a block diagonal covariance matrix of the disturbances.

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[3] Bear in mind that we have thirty firms per cluster.

4.2 Results

Results are reported in Table 5. The regression parameters β^4 are obtained by the Maximum Likelihood Method. Their sign and standard error indicate whether or not the latent variable y* (the firm's propensity to risk abroad in CEEC countries) significantly increases with the regressor. Thus, we can identify which variables affect the propensity of the sampled firms to expose themselves in CEECs through international subcontracting and FDI.

====== Insert Table 5 about here =======

The firm's process of internationalisation through subcontracting and FDI appears to be positively influenced by the following internal factors: (a) previous experience in the international markets (b) innovative capabilities, and the firm being:(c) a final producer and (d) a younger enterprise. Further, the two external factors considered in this research both appear to have a positive and significant relationship with the dependent variable. Thus, the adoption of international subcontracting and FDI seems favoured when the family firm is: (e) a parent company and (f) has settled cooperative agreements with other enterprises.

It is interesting to note that the variable "number of patents" is not significant in the model. Thus, it is not the intensity of innovation that explains the access to internationalisation but only its presence. The same can be observed for the variable "export intensity". The firms more involved in the process of internationalisation are not

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[4] And the threshold parameters.

the highest exporting firms (export intensity), but those that are experiencing some contacts with foreign markets (export propensity). Export in CEECs does not appear to influence the internationalisation strategies of our firms significantly. Therefore, the stage model discussed in the literature is not confirmed from our data. Another important result is related to the age of the firm: being an older firm appears to some extent to interact negatively with the propensity to build a strategy of internationalisation. Indeed, younger firms are likely to be more dynamic in the international markets. Finally, in our model, the insignificant value of the coefficient "family management" suggests that being a family managed firm does not penalise the path towards internationalisation.

Table 6, furthermore, reports the marginal effects of each independent variable on the two probabilities of having only subcontracts (2; Panel A) and both subcontracts and FDIs or only FDIs (3; Panel B)[5]. As they vary with the value of x, we compute them at the sample mean of the regressors, for the 'average firm'. Clearly, it is not appropriate to speak about marginal effects for almost our control variables, which are dummy variables: in this case, the effect of the variable is evaluated by comparing the probabilities resulting when the variable takes its two different values 0 and 1 (holding the other control variables fixed at their sample means), instead of calculating a derivative.

====== Insert Table 6 about here =======

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[5] As usual in models with discrete dependent variables, the marginal effects of the regressors on the probabilities are not equal to the coefficients. In general, only the signs of the changes in the probability of the first and last category (1 and 3 in our case) are unambiguous: they are reverse and equal to those for $y*$, respectively.

The export propensity is statistically significant only for probability (2). Its coefficient is not statistically different from zero at any reasonable significance level in Panel A.

All the coefficients of the variables significant in A become larger in B. This is particularly true for the variable "patent propensity". Despite the threat of collinearity, results do not change by adding the variables relative to the dimension of the firm, size and turnover alternatively, which turn out to be insignificant. This is because the dependence of the propensity to risk on size (turnover) is not linear and we expect the effect of size to decline by increasing its level. A confirmation is provided by results in Table 7, where we include among the regressors also size, and the square of size.

====== Insert Table 7 about here ======

We see that size has a positive effect on risk propensity, but this effect becomes weaker as size increases[6].

As a consequence of collinearity, the coefficient relative to PPAT becomes smaller in this specification. The variable CONTR also loses significance. Instead EXPINT seems now to have an effect (at the 10 percent level). Besides, it confirms the previously found negative effect of the age of the firm; this result is in contrast with the existing evidence provided by the literature.

Being a family managed firm and an exporter in CEECs countries continues to be unimportant. Overall this extended model is better with respect to fitting with the data, in terms of pseudo-R^2 (higher) and information criteria AIC and BIC (lower, cf. Akaike (1973) and Schwarz (1978)).

Consider the marginal effect of size on y* equal to $\beta_{size} + 2$ size β_{size2}.

Finally, we have replicated the analysis with a new model where we have treated separately the decisions to carry out (3) both subcontracts and FDIs and (4) only FDIs, the latter being a more risky choice (decisions (1) and (2) remain as before). In Appendix 1 (Table 8) we have reported the results. They are not reliable owing to the very small number of firms that undertake the most risky strategy of only FDIs (cf. Table 4).

5. Discussion and conclusion

To date, little empirical research has been conducted to identify the variables that affect the propensity of family businesses to internationalise their operations through international subcontracting and direct investment abroad. This study has attempted to fill this gap, providing new theoretical and empirical insights on the process of internationalisation of family firms specialising in traditional manufacturing industries.

Consistent with the international business literature, the study focuses on a firm's resource endowment as a key driver for family firms' internationalisation. Several internal and external factors are considered potentially to affect the firm's resource endowments of managerial, financial, organizational, technological and knowledge resources. The internal factors include the family firm's control structure, size, innovation capabilities and international experience. Apart from generating resources internally, the family firm can obtain them externally by establishing stable relationships with other firms, via shareholdings or cooperative agreements. This

internal/external perspective is applied to test empirically seven hypotheses of the effect of resource endowment related variables on the internationalization of family businesses.

Among internal factors, the acquisition of international knowledge through export experience is a significant variable that determines the propensity of family firms to internationalise their operations through international subcontracting and direct investment abroad, supporting Hypothesis 3a. Specifically, we found that among the two measures used to capture export experience, export propensity and intensity, only export propensity turned out to be significantly and positively associated with the adoption of a higher risk international strategy. This result suggests that the firms more involved in the process of internationalisation are not the highest exporting firms (export intensity), but those that are experiencing some contacts with foreign markets (export propensity). This seems to indicate that previous export experience reduces family firms' liability of foreignness, as a by-product of the knowledge acquired in the international environment. However, the lack of significance of export intensity seems to indicate that the internationalisation process does not follow a pure incremental path. Consistent with this interpretation, our results also show that export in CEECs does not appear to influence significantly the firms' propensity to engage in international subcontracting and/or FDI in CEECs, thus supporting Hypothesis 3b. Indeed, we found that for several firms in our sample the decision to invest in a foreign country, notably in the CEECs, is not preceded by an established export in that country.

Taken together, the empirical confirmation of the two hypotheses related to the effect of international experience has important theoretical implications. Since the introduction of the stage theory, the general rule assuming incremental resource

commitment to foreign markets has been questioned both by proponents and opponents of this model (Andersen 1993; Nordström, 1991; Petersen and Pedersen, 1999; Vahlne and Nordström, 1993). Our findings confirm the limitations of strict incremental interpretation also for family businesses, including SMEs. For several family SMEs the process of internationalisation was not lengthy and incremental, as the stage theory would have predicted. Family firms in our sample could not gradually build up their foreign activities in steps, starting with the sales activities and later adding the production activities. Our results indicate that domestic factors, such as increasing wages and overall cost of production, combined with increased globalization, have provided incentives for firms to skip stages in their internationalisation process, forcing them to undertake a larger commitment settling production sites abroad during the early phase of their international experience. This result offers support to the view that firms entering foreign markets with motives other than market seeking, such as access to cheap labour or other superior production conditions, cannot choose the route of slow sequential internationalization (Petersen and Pedersen, 1999). The present study shows that this theoretical argument also holds for the family business internationalization process.

Besides international experience, other internal factors were found relevant in this study. Our results show that patents propensity is positively and significantly related to the adoption of an international strategy based on international subcontracting and FDI, thus supporting Hypothesis 4. This result shows that the theoretical view assuming that innovation capabilities favour firms' investment abroad is confirmed also in the case of family business.

We assumed that the presence of external managers in the control structure of family firms could reduce firms' aversion to risk, favouring their international involvement through international subcontracting and FDI (Hypothesis 1). This assumption is not confirmed in the analyses. Indeed, family management is not significant in the model. This result has interesting theoretical implications for family business research, suggesting that family involvement in management is not clearly and necessarily a limitation (or advantage) for international expansion. In our sample, when only family members are involved in management, firms do not approach internationalization with more caution. This finding underlines that the effect of family management on the international growth of family business is still an open issue which deserves attention in future research.

We also assumed that size could favour family firms' propensity to increase their international involvement through international subcontracting and FDI (Hypothesis 2). Unfortunately, given collinearity problems in our data, this hypothesis could not be tested.

In our model, the significant and positive effect of two control variables related to firms' typology (being a commissioning or subcontracting firm) and firms' age contribute to provide a more fined grained picture on the effect of internal factors on family firms' internationalization involvement. We found that family firms' positioning in the business filière has an effect on their international involvement. Indeed, commissioning firms in our sample are more likely to engage in international subcontracting and FDI compared to subcontractors. We also found that older firms in our sample are less likely to adopt riskier forms of internationalization. This finding has relevant theoretical implications for researchers concerned with the phenomenon of

early internationalization (Ancona et al., 2001; Rialp et al., 2005; Zucchella et al., 2007). While previous studies have related a firm's propensity to engage in early internationalization to belonging to a high tech or knowledge-intensive industry (Preece et al., 1998), our findings show that this new phenomenon is much more general, including also traditional manufacturing industries increasingly exposed to global competition. Further, the recognition that younger family firms in our sample are more likely to engage in international subcontracting and FDI underlines the urgency to incorporate the temporal dimension of international expansion in the realm of family business studies.

Finally, the model presented in this study also tested the effect of two external factors: shareholdings and cooperative agreements. Both of them were found to be significantly and positively related to family firms' international involvement, thus supporting Hypothesis 5a and Hypothesis 5b. From the theoretical point of view, these findings confirm the relevance of resources accessible through an external stable relationship with other companies for the international expansion of SMEs in general (Keeble et al., 1998; Welch, 1992) and for family firms in particular (Fernández and Nieto, 2005; Gallo & García-Pont, 1996). In this respect, the present study contributes to offer a stronger validation of the relevance of alliances and cooperative agreements in fostering family firms' propensity to expand abroad, showing that this holds not only for export activity, that is, the international dimension mainly investigated in previous studies, but also for firms' involvement in international subcontracting and FDI.

As with any research, this paper has limitations that should be acknowledged. The main limitation consists in the limited size of the sample, which raises concerns about statistical power. Further, because our research design is cross-sectional, we

cannot deduce causal relationships. Future research using a longitudinal design is encouraged to provide additional insights on causal relationships among variables investigated in this study. In addition, data were collected from family firms located in three Italian industrial districts. Their attitudes towards international involvement may not be generalized to other Italian family firms that do not belong to an industrial district. Indeed, district and cluster family firms could exploit specific location advantage to undertake more rapid and intense internationalisation strategy. For instance, spatial, social and cultural proximity characterizing the industrial district environment could render the establishment of cooperative agreements with other firms less costly to handle, and this could possibly make this external factor more effective as a driver for the internationalisation process of district family firms compared to family firms that are not located within an industrial cluster. Therefore, future extensions of this work will aim to compare the relevance of the internal and external factors examined in this study in a larger sample, including both district family firms and family firms that do not belong to an industrial district. Finally, as noticed by Zahra (2005), family businesses also vary considerably in risk taking, which can influence international expansion. These differences manifest significant variations in national cultures, thus preventing us from generalising our findings to family firms from other countries. Therefore another line for future research in this field could use comparative studies to clarify the validity of the proposed framework in other national settings.

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Tab. 1 - Key sample data, year of analysis: 2001

	Montebelluna (N=30)		Verona (N=30)		Vibrata Valley (N=30)	
	District	Sample	District	Sample	District	Sample
Firms	464	30	324	30	484	30
Employees	8943	3636	4038	1407	6231	1590