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The Relationship between Family Orientation, Organization Context, Organization Structure and Firm Performance

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THE RELATIONSHIP BETWEEN FAMILY ORIENTATION, ORGANIZATION CONTEXT, ORGANIZATION STRUCTURE AND FIRM PERFORMANCE

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ABSTRACT: This study focuses on the prediction of three firm performance indicators, sales growth, innovation performance and profitability, on a sample of small and medium-sized firms in the Netherlands. Predictions from agency theory and the resource based view of organizations lead to alternate hypotheses regarding the direct and indirect effects of family ownership and management on firm performance. Other variables in the analysis include various organization structure variables including standardization, self coordination, team coordination, decentralization, departmentalization and specialization, and control variables such as firm size and age. Results suggest a direct effect of family orientation on innovation performance, even when controlled for other variables. The effect of family orientation on the other two dependent variables is quite limited.

KEYWORDS: organizational structure, family business, family orientation, small and medium-sized enterprises

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ABSTRACT: This study focuses on the prediction of three firm performance indicators, sales growth, innovation performance and profitability, on a sample of small- and medium-sized firms in the Netherlands. Predictions from agency theory and the resource based view of organizations lead to alternate hypotheses regarding the direct and indirect effects of family ownership and management on firm performance. Other variables in the analysis include various organization structure variables including standardization, self coordination, team coordination, decentralization, departmentalization and specialization, and control variables such as firm size and age. Results suggest a direct effect of family orientation on innovation performance, even when controlled for other variables. The effect of family orientation on the other two dependent variables is quite limited.

INTRODUCTION

Variation in family ownership and management may help to explain the differences in performance among SMEs. Although Dyer (2003) and Schulze et al. (2003) both point out that family is a neglected variable in organizational research, recent research is becoming more empirically and theoretically grounded in the broader management literature. Research on family orientation suggests somewhat of a paradox. Whereas on the one hand, family orientation is generally considered to be negatively associated with innovation performance, (as well as profitability, in some studies), on the other hand, family firms are often associated with structural characteristics that are positively associated with these performance variables, such as less formal organizational structures.

In the present study, family orientation is defined based on a number of factors (number of generations of family ownership, intentions regarding business transfer, etc.). We explore the direct and indirect effects of family orientation on firm performance, while controlling for organization structure and certain organization context variables, including firm size and age. In developing the propositions of the model, we compare and contrast predictions and explanations based on agency theory with those based on a resource-based view. We argue that the direct effect of family ownership and management on performance found in SMEs is more consistent with agency theory whereas the indirect effects, via various organization characteristics variables associated with greater organizational complexity and resource richness, may support a resource based view of the firm. The organization characteristics chosen for the present study include firm size, age and organization structure. Structure variables include standardization, self-coordination, team coordination, decentralization, departmentalization and specialization. The paper has two objectives. First we examine the

effects of family orientation on organization structure. Second, we examine the potential of family orientation as a possible contingency variable to explain the relationship between organization structure and performance in SMEs.

Part one of the paper briefly reviews background literature about the concept of organization structure. Part two examines how agency theory and the resource-based view of the firm might be used to explain the impact of family orientation on the firm. Part three describes the research framework and hypotheses for the study. Parts four through seven then present the methodology, results, discussion, and conclusion.

Organization Structure and Performance

Research on organization design in the fields of management and organization behavior is long-standing with a full review of its importance and past empirical research beyond the scope of this paper (see Axley, 1992; Blau, 1971; Child 1972; Child, 1976; Covin and Slevin, 1988; Pugh and Hickson 1976). However, research on start-ups (e.g. Miller and Friesen 1980) indicates that developing and implementing an adequate structure is one of the most important challenges entrepreneurs face. Recent empirical research demonstrates that the organisational design process is unmistakably an important determinant of the performance of firms (Meijaard et al, 2002). It is also useful to point out that theory on organizational structure and design has developed from a normative, universalistic approach (promoting 'the best structural form'), via a normative contingency theory approach ('the best structural form given a specific set of conditions'), to a notion of equifinity (Doty, Glick and Hubert 1993). Research to date suggests the importance of understanding organization structure, both as dependent and independent variable in the study of small firms (Caruana et al, 1998; Chaston, 1997; Geeraerts, 1984; Johnston, 2000; Meijaard et al, 2002).

Agency theory and the family firm

Agency theory focuses on the principals (owners) and agents (managers) of a company. Jensen and Meckling (1976) define agency costs as the sum of the principal's monitoring expenditures, the agent's bonding expenditures and the residual loss[1]. Agency theory has been used in compensation theory to explain the steps that the owner (i.e., the principal) can take to bring the interests of managers (i.e., agents) into alignment (e.g., Welbourne and Gomez-Mejia, 1995). Steier (2003) applies agency theory to the family firm as follows. Since the owner (or principal) and manager (or agent) are typically part of the same family, monitoring, contracts or other coordination between the two should be more efficient and thus less expensive. If the owner and manager are one and the same, monitoring (of oneself) is obviously not even necessary, saving on agency costs. Randoy and Goel (2003) use this logic to assert that family firms may use more informal practices successfully to reduce costs and improve profitability. Pollack (1985) describes a number of advantages in the family-owned firm: strong incentives to act in the long-term interest of firm and family,

[1] For a more detailed discussion of the agency relationship, the reader is referred to Fama and Jensen (1983), Jensen and Meckling, (1976) and Steier (2003).

effective monitoring of work activities, selfless rationalities and strong loyalty to the firm and family. But the advantages are not always the case.

There are situations where a relative does not perform well and other family owner/managers may be more reluctant to take action against a relative than against a nonperforming nonrelative for fear of damaging family relations, even if it is bad for the business. Schulze et al (2003) refer to this latter phenomenon as a sort of *altruism* paradox: the owner manager, by attempting to help other family members unintentionally and/or indirectly encourages them to shirk their duties. Others argue that such altruism, though leading to negative performance, does not necessarily change the types of monitoring devices used. For instance, Gomez-Mejia et al (2001) find that, even when faced with motivation and performance problems, families are often reluctant to monitor and discipline family members. Thus, even although Schulze et al (2003) do find a positive relationship within family firms between the use of monitoring systems and performance, this may not be due to increased agency costs. Greenwood (2003) argues by contrast that altruism may actually lower agency costs by removing the agency problem. In short, shirking and the altruistic behavior may not necessarily alter the predicted direction of the effect: that owners of family-owned firms monitor agents less than do owners of non-family firms.

Following these arguments, we argue that family firms have less of a need to monitor agents in the firm especially when they are from the same family. One would expect less reliance on formal practices in the family firm, regardless of size. Since the family owner-managers' expectations and goals influence the choice of control mechanism, it is thus seen as less likely that (especially smaller) family-firms will develop formal structures to replace direct control.

In addition, family ownership is associated with a desire to remain independent and keep full control over the organization (Blais and Toulouse, 1990; Bacon et al., 1996). Case-studies suggest that employers often associate professional company practices with a loss of control over (and flexibility of) the employee relations (Koch and De Kok, 1999). This would provide an additional explanation for a direct negative effect of family ownership and management on formal coordination mechanisms.

The implication of the agency theory argument is that we would expect a negative relationship between family orientation and organization structure. First of all, structure as such is likely to be less necessary in the family owned and managed firm. Secondly, since informal controls are more efficient in the family owned and controlled firm, we would expect better performance in the firm with greater family orientation in the absence of formal control, or at the least we would expect the impact of organization structure on performance to be different in family versus non-family firms.

The family firm and the resource-based view

An alternative explanation for the relationship between family ownership and organization structure is grounded in the resource-based view of the firm. The resource-based view is based on the assumption that differences in physical, organizational and human resources between firms cause a fundamental heterogeneity in their productive potential. Given this heterogeneity, the long-term competitiveness of a company depends upon the resources that not only differentiate it from its competitors, but that are also durable and difficult to imitate

and substitute (Hansen and Wernerfelt, 1989; Mahoney and Pandian, 1992; Barney, 1991; Prahalad and Hamel, 1990; Rangone, 1999; Priem and Butler, 2001). Resources are not meant only in the physical sense but refer to organizational capabilities as well (Ulrich and Lake, 1991).

The resource-based view can be used to understand the impact of family ownership on other firm characteristics (Sirmon and Hitt, 2003). In this paper, we suggest that the resource-based view may form the basis for suggesting an indirect effect between family orientation and performance by way of organization structure. For example, Reid and Adams (2001) find that many family firms use less formal practices, and they explain this by suggesting such firms have more limited organizational capabilities. Past research supports the finding that family firms are less complex and smaller than non-family firms (Daily and Dollinger, 1993; Donckels and Frohlich, 1991, Cromie et al., 1995, Westhead and Cowling, 1996). Family firms are also less specialized or departmentalized (Reid and Adams, 2001; Cyr et al., 2000). In a study of Irish SMEs, Reid and Adams (2001) find that family businesses are less likely to have an HRM department. Cyr et al. (2000) find a negative relationship between the percentage of the firm owned by the CEO (correlated with family ownership) and the presence of an HRM vice-president. Furthermore, family firms are less likely to use formal accounting and planning practices than non-family firm counterparts, even when controlling for size and other factors (Jorissen et al, 2002). Some researchers (e.g. Westhead and Cowling, 1996) suggest that it may not be family ownership and/or management per se that influence firm practices and performance, but indirect effects due to the fact that such firms often have more limited resources to invest, choose less technical complex industries, and are thus are more constrained vis-à-vis resources available for company growth. In sum, the negative impact of family ownership and management on performance may result from an indirect effect in that family firms tend to be smaller and less complex organizations, and with more limited resources.

To support the premise of an indirect effect based on the resource-based view, it is important not only to relate family ownership and management to (smaller) size and (less) complexity but also to demonstrate the links between size, complexity and other organization characteristics with performance. The remainder of this section provides a brief overview of this literature although it is beyond the scope of this paper to cover this literature exhaustively.

The link between firm size and organization structure is well established. Size is probably the contingency variable most directly related to structure; as organizations grow, both the opportunity and need for work division and co-ordination rise accordingly (Pugh and Hickson 1976, Blau and Schoenherr 1971, Child and Mansfield 1972, Miller and Toulouse 1986). Robbins (1990) summarizes that complexity and formalization are positively related to size, while research on centralization yields mixed findings. Specialization is also typically associated with greater firm size (Bacon et al., 1996; Jackson et al., 1989; Wagner, 1997). Employees in smaller firms often have to perform a greater variety of tasks than do employees in larger firms, and specialists are less likely to be found in smaller firms. Heneman and Berkley (1999) confirm this trend within the HRM function. The negative relationship between firm size and HRM specialization (i.e., the presence of a specific HRM department and/or manager) is also confirmed (Hornsby and Kuratko, 1990; Atkinson and Meager, 1994; Cyr et al, 2000). Geeraerts (1984) finds positive correlations between size and complexity, formalization and decentralization.

Most formal organization structures require considerable development costs requiring financial resources typically more available to larger firms (Klaas et al., 2000). These structures often lead to a further cost advantage. Growth theories (Chandler and McEvoy, 2000; Galbraith, 1973; Gnan and Songini, 2003) also note the positive trend between firm size and complexity. As firms increase in size and complexity, they typically develop more layers of management and they become more formalized in order to process information more effectively within the organization (Galbraith, 1973).

In attempts to explain these patterns, some scholars argue that an informal approach is more suited to the small firm. For instance, Hill and Stewart (1999) suggest that smaller firms should be more flexible and informal to be able to cope with the higher levels of environmental uncertainty. By contrast, others argue that it is lack of foresight and resources that lead to less structure. The problem may not only arise from limitations of physical capital but of human capital as well. Indirect confirmation of this latter explanation can also be found in results of a study of firm size and innovation by Damanpour (1992). In a meta-analysis of data from 20 published studies, he finds a strongly positive relationship between firm size and innovation, indirectly supporting the argument that size is an advantage to firms, providing the resources needed to innovate (Damanpour, 1992). These results would appear to counter Hill and Stewart's argument that smaller size is an advantage. In another study, Damanpour provides an explanation for why specialization (or more generally structural complexity) is consistent with the resource-based view. "In complex organizations, coalitions of specialists in differentiated subunits increase the depth of the knowledge base, which in turn, increases the development of new ideas" (Damanpour, 1996, p. 695). In other words, greater specialization is associated with greater knowledge resources.

To summarize the main points of the resource-based view as applied to the present problem, we posit alternatively, that especially among SMEs, family ownership and management may be negatively associated with organization structure, and in turn, with performance, due to resource limitations given their comparatively smaller size and reduced complexity, compared with non-family firms. In our study, in addition to firm size, variables which may reflect this reduced complexity include less formalization, less specialization, and less standardization.

MODEL AND HYPOTHESES

In this section, we present the model and hypotheses to be tested in our research. We will explore the model in two parts. The first set of hypotheses pertains to the relationship between family orientation and organization structure (See Figure 1, Arrow 1). Based on both agency theory as well as the resource-based view, we would expect a negative relationship between family orientation and various organization structure characteristics. However, we would expect that size would explain this effect according to the resource-based view, while the effect would be independent of size according to agency theory.

We state Hypothesis 1 as follows:

Hypotheses 1: SMEs with greater family orientation are likely to be less structured than their counterparts, even when controlling for size and age, meaning that they are less standardized, less departmentalized and less specialized.

Hypothesis 1 is consistent with the agency theory: firms with greater family orientation will be less structured, independent of resource differences reflected by size or age. Rejection of Hypothesis 1 would support the resource-based view, i.e. the alternative hypothesis that family firms are no different than non-family firms, once size and other resource factors are controlled for.

FIGURE 1 ABOUT HERE

We also explore the relationships between family orientation and other structure variables, including decentralization, self coordination and team coordination without a priori predictions.

Another assumption of this model is that it distinguishes between a direct and indirect effect of family orientation on organization performance (See Figure 1). Hypothesis 2 predicts an indirect (negative) relationship between family ownership and management (referred to as family orientation in the model) and organization performance via certain organization characteristics associated with greater complexity and/or richer organizational resources (arrows 1 and 2 in figure 1). The assumptions for this hypothesis draw upon the resource-based view and the literature on organization complexity and uncertainty, to suggest that family firms may perform less well because they have fewer resources (typically being smaller). This hypothesis is consistent with a line of research on family firms carried out by Storey and colleagues, who found that the differences between family and nonfamily firms often reflect indirect effects based on other intervening factors such as firm size (Westhead and Cowling, 1996).

We state Hypothesis 2, as follows:

Hypothesis 2: SMEs with more family orientation perform less well due to differences in structure and organization context.

To test Hypothesis 2, we include a limited number of organization context variables to represent this organization context, including firm size and age, as well as the six structural variables listed earlier.

Finally, Hypothesis 3 predicts that informal control is an alternative appropriate to the family owned and managed firm, in line with agency theory, and that family owned firms using less formal and standardized controls will be more efficient and therefore more profitable. We would therefore expect a direct negative effect of formal controls on performance, for family owned and managed firms in contrast to a direct positive effect of formal controls on performance for non-family owned and managed firms.

Since we use a continuum concept of family orientation, we state Hypothesis 3 as follows:

Hypothesis 3: Family Orientation will act as a contingency variable in the relationship between organization structure and performance, such that SMEs with weaker (or no)

family orientation and relying on more formal coordination will perform better than those relying less on formal coordination. The opposite is expected for SMEs with strong family orientation.

METHOD

This section discusses the collection of data and the construction of variables used in the analyses.

Sample and data collection

Three times a year, a group of about 2700 entrepreneurs of Dutch small firms participate in EIM's SME Panel. The panel is a stratified sample in three size-classes and nine economic sectors, each cell meant to contain 100 firms[2]. EIM and other parties use the panel for stand-alone and longitudinal research. The purpose of the panel is to gather information about the attitudes, behavior and performance of Dutch small firms (i.e. with less than 100 employees). For this specific investigation, we included companies from the panel that employ at least one person besides the owner. Data was combined from several waves of data collection between 2001 and 2003.

Description and construction of variables

The organization structure variables: The organization structure variables for this study were developed by Meijaard et al. (2002). They developed simple self-explanatory statements and used 20 three-point Likert-type questions and a set of binary variables to capture organizational structure (see Figure 2). Each of the constructs for departmentalization, decentralization and standardization combines 4 items and has a Cronbach's α of more than 0.8.

The family orientation scale was developed from a variety of individual items. The scale has a Cronbach-alpha reliability coefficient of 0.89.

Performance variables were developed for profitability, sales growth and innovation performance (see Figure 2). The log of profitability was used for 2001 and 2002. For sales growth, two years of data were also combined. Innovation performance was based on (the self-stated) number of innovations introduced over the past three years.

Finally, two control variables were measured, including firm age, and firm size.

[2] The size classes are: 0 through 9 employees, 10 through 49 employees and 50 through 99 employees. The sectors are: Manufacturing, Construction, Trade & repair, Meals & food services, Transport, Business services, Financial services, Personal services and Non-private (includes healthcare, farming).

Data Analysis

For hypothesis 1, two protocols were used to test for mediating effects of the organization characteristics variables; one proposed by James and Brett (1984) and the second, by Baron and Kenny (1986). According to Baron and Kenny (1986) one can test for the mediating effect of variable *m* (organization context characteristics of size and age), by first examining the relationship between proposed antecedent *x* (family orientation) and consequence *y* (organization structure), and then investigating the extent to which this relationship diminishes (or even vanishes) if mediating variable *m* is included in the model. Assuming significant relationships between *x* and *y*, *x* and *m*, and *m* and *y* (using bivariate tests), to support the inference that *m* completely mediates the effect of *x* on *y*, the effect of *x* on *y* (i.e. the t value for the unstandardized B coefficient) should be significant in the model $y=f(x)$ but not in the model $y=f(m,x)$.

Based on the same starting premise of significant bivariate relationships between *x* and *y*, *x* and *m*, and *m* and *y,* James and Brett (1984) compare the models, $y=f(m)$ and $y=f(m,x)$. If the added effect of *x* (tested by the significance of the *R*-squared change when *x* is added to the first model) is not significant, *m* can be seen as completely mediating the relationship between *x* and *y*. Conversely, a significant result provides support for a direct effect.

In this study we combine the two protocols by estimating three separate models: $y=f(x)$, $y=f(m)$ and $y=f(x,m)$. We assume the presence of a mediating effect when the following requirements are met: a) significant effect of *m* on *y* in the model $y=f(m)$; b) a significant effect of *x* on *y* in the model $y=f(x)$; and c) a non-significant effect of *x* on *y* in the model $y=f(m,x)$. Likewise, we assume the presence of a direct effect in the case of a significant effect of x on y in the model $y=f(x)$ in combination with a significant added effect of x on y in the model $y=f(m,x)$.

A similar protocol was followed to test direct versus indirect effects of family orientation on performance (for Hypothesis 2). The third hypothesis is tested by analyzing the interaction effects of family orientation and the various structure variables on firm performance. Analogously, comparison of the models with and without these interaction effects should enable us to test whether or not family orientation acts as contingency variable in the relationship between structure and performance.

RESULTS

Descriptive and Bivariate Statistics

Table 1 reports the means, standard deviations, and correlation coefficients between the major variables in this study. All non-missing data available for a particular relationship was used. Because data was collected from several waves of data collection, the actual sample size (n) for individual relationships varies. In reviewing the findings, some of the expected relationships between size and structure variables are in the expected direction. Thus, the relationship between firm size and departmentalization is strongly positive ($r=.66$; $p<.001$), as is the relationship between size and standardization ($r=.43$; $p<.001$), and the one between size and specialization ($r=.19$; $p<.001$). Consistent with other studies, the relationship between size and family orientation is negative ($R=-.14$; $p<.001$). Examining the relationship between family orientation and structure variables, several correlation

coefficients are also significant and negative including the relationship between family orientation and departmentalization (r=-.15; p<.001), decentralization (r=-.15; p<.001), standardization (r=-.09; p<.01); and specialization (r=-.12; p<.01). However, there is no relationship between family orientation and either team coordination or self coordination. Regarding profitability, several bivariate relationship are significant, most notably size (r=-.35; p<.001); departmentalization (r=-.17; p<.01), and specialization (r=-.18; p<.01) with a weaker relationship with standardization (r=-.14; p<.05). However, several of the independent and control variables are positively correlated with innovation performance, including size, departmentalization, decentralization, standardization, team coordination and specialization. Family orientation is weakly but negatively correlated with innovation performance (r=-.10; p<.05). Strikingly, none of the variables directly predicts sales growth.

TABLE 1 ABOUT HERE

Multiple regression analyses to test Hypotheses 1

The results of the test for Hypothesis 1 are presented in Table 2. Since team family orientation is not related to coordination and self coordination, tests for these variables are omitted. For the other four variables, regressions are presented with and without controlling for the intervening effects of company size and age. Results appear fairly straightforward. Whereas size intervenes in the relationship between family orientation and specialization, departmentalization and standardization, the relationship between family orientation and decentralization is independent of size or age, suggesting a direct effect of family orientation in the last relation.

Table 2 about here

Multiple regression analyses to test Hypotheses 2 and 3

Three separate tables are included for the multiple regression analyses. Table 3 shows the statistical effects of the various independent and control variables on the dependent variable, innovation performance. Table 4 reports results for the dependent variable, sales growth. And Table 5 shows the results for the prediction of the log of profitability (two years combined).

Tables 3, 4, and 5 about here

Based on established protocols, it only makes sense to test for mediating effects when variables x, m, and y are interrelated with one another. In the case of the performance variables, this is only the case where y=innovation performance. The estimation results of

the regression models for y=f(x,c), y=f(m,c), and y=f(m,x,c), where y=innovation performance are presented in columns 1, 2, and 3 in table 4, where c represents additional control variables in the equation. In addition, the last column in Table 4 reports the change in R^2 for two separate analyses (either when a block is entered first—without the control variables; or last in the all-variable regression model).

In a regression that only includes family orientation as the independent variable, the unstandardized B coefficient equals -.11 (p<.01).

Which part of this total family firm effect is mediated by organizational characteristics? This can be determined by looking at the third model reported in table 4. In this full model, the family firm unstandardized B coefficient is -.10 (p<.01). The added contribution to the R^2 when family orientation is entered last in the equation, however, appears to be near or at zero, results suggesting that the effects are indirect only, lending more support for Hypothesis 2 (proposing indirect effects) than Hypothesis 3 (direct effects).

DISCUSSION

The results from the present study reject Hypothesis 1, namely that firms with greater family orientation tend to be less structured, even when controlling for size effects. On the contrary, when size is controlled for, the size of the relationship between family orientation and each of the variables, specialization, standardization, and departmentalization, is reduced to zero. The exception is decentralization. Thus firms with stronger family orientation tend to be more centralized (i.e. less decentralized) even when company size and age are controlled for. The results most clearly support the resource-based view for the first three structure variables. In particular, it is posited that these variables are likely to reflect greater resource availability and/or organization capabilities within the firm making it easier for the firm to develop more structure. Alternatively, these findings can be explained by the company growth theory, which suggests that as a company gets larger, the management task becomes more complex and requires a more professional approach. These relationships have been extensively documented in the literature (Perren, Berry and Partridge, 1999, Deakins, Morrison and Galloway 2002, Gnan and Songini, 2003). Furthermore, formal planning and control systems can help a family firm to cope with the challenges of family firm continuity as well (Ward, 1987)

With respect to decentralization, the findings suggest that family firm presidents have a stronger preference to maintain direct control over decision making, a finding inconsistent with both the agency and resource-based views.

It was argued that direct effects might be explained by agency theory and that indirect effects might be explained using the resource based view. Results, however, appear to support, at least partially, both explanations. In the discussion, we examine these premises more closely and discuss additional theories that should be considered in future research.

As mentioned in the introduction, agency theory provides one explanation for the direct effect. That is, the family firm effect is in part due to a decreased (perceived or actual) need for monitoring of the management by the ownership. These may overlap in part, or in their entirety. However, organization control theory and institutional theory might also provide useful insights consistent with support for a direct effect. As pointed out by Gnan and Songini (2003), organizational control theory points out that social control systems are more effective than bureaucratic and administrative systems when strategy, decision making and

power in the organization are managed by few people who share common values and coordinate themselves by informal relationships (Gnan and Songini, 2003, Mintzberg, 1983, Hopwood, 1974). It could be that in family firms, the social interactions among family members allow the use of informal and cultural mechanisms that substitute or complement the formal administrative systems. However, to test the accuracy of this explanation, future research is needed that would measure the effect of different management practices on performance.

The results for Hypotheses 2 and 3 are less clear. There does appear to be a negative effect of family orientation on innovation performance, even when controlling for the various structure variables, suggesting a direct effect rather than an indirect effect, more consistent with agency theory than with the resource-based view. On the other hand, the results for profitability and sales growth suggest no direct relationship at all with family orientation. We do find some support for a contingent effect of family orientation on the link between structure and performance, specifically on the link between decentralization and profit and departmentalization and sales growth. Nevertheless, mostly given the overall explanatory power for sales growth, perhaps prediction of sets of performance indicators such as profitability and sales growth involves more sophisticated techniques and more elaborate modeling than was attempted in this study.

Conclusions

The primary purpose of this study was two-fold: to examine the effect of family orientation on organization structure, and in turn, to examine the direct and indirect effects of family orientation on performance. The first task was easier to complete than the latter. We do confirm, consistent with previous research, a tendency for firms with greater family orientation to be less structured, i.e. to be less standardized, less specialized, and less departmentalized. They are also more centralized in decision making. This family firm effect occurs indirectly (since family businesses tend to be smaller, and/or less complex than non-family businesses) for standardization, specialization and departmentalization, but indirectly for the variable of decentralization but also directly. The indirect family firm effect is consistent with predictions based on the resource-based view although (of course) alternative interpretations of the findings cannot be ruled out. However, even though a direct effect is found for decentralization, it is not clear whether the agency view provides a suitable explanation since the prediction is in an opposite direction that which would have been expected (with more family oriented firms being more centralized, and thus maintaining stronger central control, rather than less).

The role that family orientation might play in design of contingency theories of organization effectiveness is even less clear. There do appear to be a few significant interaction effects but the results are not straightforward. Future research is therefore needed to examine relations in more detail between organization structure and performance for small firms, using family orientation as a contingency variable.

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Table 1: Pearson Correlations between All Variables for the Total Sample

	1	2	3	4	5	6	7	8	9	10	11	12
1. Sales Growth	1											
2. Innovation Performance	.01	1										
3.Profitability (log)	-.14*	-.01	1									
4. Firm size:	-.01	.30***	-.35***	1								
5. Age:	.02	.10***	-.10	.35***	1							
6. Family orientation:	-.05	-.10***	-.03	-.14***	.00	1						
7. Departmentalization:	.00	.29***	-.17**	.66***	.17***	-.15***	1					
8. Decentralization:	-.05	.15***	-.02	.07*	.01	-.15***	.08**	1				
9. Standardization:	-.03	.17***	-.14*	.43***	.10***	-.09**	.44***	-.02	1			
10. Team coordination	-.01	.07*	.05	.00	.00	-.02	.04	.16***	.02	1		
11. Specialization:	-.02	.18***	-.18**	.19***	.09**	-.12***	.24***	.10***	.23***	.07*	1	
12. Self coordination	-.02	.04	-.01	.00	-.04	-.04	-.02	.13***	.06*	.10***	.07*	1
MEAN	27	.01	.06	2.76	35	-.64	-.11	-.56	-.07	-1.38	-1.55	-1.70
STD. DEVIATION	77	2.05	2.99	1.44	32	3.91	1.72	1.96	1.71	.59	.70	.70
N	916	1670	507	1888	1952	2183	1303	1303	1348	1303	1302	1303

***p<.001(2-tailed); **p<.01-level (2-tailed); * p<.05 (2-tailed).

Table 2: Family orientation with and without controls, regressed on structure variables

	Standardization		Decentralization		Departmentalization		Specialization	
Explanatory Variables	B-value	B-value	B-value	B-value	B-value	B-value	B-value	B-value
Controls								
Age	- .00		.00		.00		-.00	
Firm Size	.64***		.05		.95***		.10***	
Family Orientation								
Family	-.01	-.04**	-.07***	-.08***	-.01	-.07***	-.01	-.02***
R-square	.20	.01	.02	.02	.41	.02	.03	.01
Adjusted *R*-square	.20	.01	.02	.02	.40	.02	.03	.01
F-Statistic	77.68***	8.67**	6.43***	24.82***	209.03***	25.59***	10.61***	15.44***
DF	3, 957	1,1132	3,923	1,1095	3,923	1,1095	3,923	1,1095

***p<.001; ** p<.01;* p<.05

Table 3: Effects of family orientation and organization and structure on profitability (log function)

	Family Orientation + Controls		Structure + Controls		All Variables		All Variables + Interaction Terms		Δ R2 entered first/last
Explanatory Variables	β-value	*t*-value	β-value	*t*-value	β-value	*t*-value	β-value	*t*-value	
Control									.13*** / .09***
Age	.00	-.20	.00	.18	.00	.01	-.00	-.35	
Firm Size	-.97***	-5.24	-1.07***	-4.36	-1.09***	-4.33	-.99***	-3.94	
Family Orientation									.00 / .00
Family	-.09	-1.23			-.10	-1.34	.07	.23	
Organization Structure									.07* / .03
Standardization			-.04	-.35	.00	.02	.03	.25	
Self coordination			-.07	-.29	.03	.13	.07	.26	
Team coordination			.19	.61	.14	.43	.11	.33	
Decentralization			-.01	-.08	-.00	-.04	-.06	-.61	
Departmentalization			.21	1.37	.17	1.10	.18	1.12	
Specialization			-.60*	-2.05	-.70*	-2.34	-.65*	-2.14	
Interaction terms									---/.05 *(last)
Family X Standardization							-.06	-1.17	
Family X Self coordination							-.02	-.13	
Family X Team coordination							.23	1.49	
Family X Decentralization							.11*	2.40	
Family x Departmentalization							-.08	-1.35	
Family x Specialization							-.10	-.76	
R-square	.13		.15		.16		.22		
Adjusted *R*-square	.12		.11		.12		.15		
F-Statistic	10.13***		4.44***		4.17***		3.45***		
DF	3, 201		8, 206		9, 195		15, 189		

***p<.001; ** p<.01;* p<.05

Table 4: Effects of family orientation and organization and structure on sales growth

	Family Orientation + Controls		Structure + Controls		All Variables		All Variables + Inter-action Terms		Δ R2 entered first/last
Explanatory Variables	β-value	*t*-value	β-value	*t*-value	β-value	*t*-value	β-value	*t*-value	
Control									.01 / .01
Age	.23*	2.02	. 19	1.69	.23	1.94	.29*	2.55	
Firm Size	-3.46	-.92	-1.90	-.40	-2.79	-.57	-3.42	-.71	
Family Orientation									.00 / .00
Family	-1.81	-1.22			-1.84	-1.22	-15.46**	-2.57	
Structure									.00 / .00
Standardization			-1.67	-.62	-.1.61	-.59	-.1.82	-.68	
Self coordination			-1.61	-.29	-.1.86	-.33	-.1.64	-.30	
Team coordination			-1.88	-.29	-.1.14	-.17	-.21	-.03	
Decentralization			-1.30	-.66	-.1.48	-.73	-.1.86	-.93	
Departmentalization			.40	.13	.42	.14	.74	.24	
Specialization			-1.11	-.19	-.97	-.17	.55	.09	
Interaction terms									---/.05** (last)
Family X Standardization							1.82	1.59	
Family X Self coordination							-3.83	-1.87	
Family X Team coordination							-.90	-.36	
Family X Decentralization							-1.50	-1.80	
Family x Departmentalization							.2.26*	2.12	
Family x Specialization							-3.15	-1.47	
R-square	.01		.01		.01		.06		
Adjusted *R*-square	.00		-.01		-.01		.03		
F-Statistic	1.63		.56		.69		1.86*		
DF	3, 426		8, 428		9, 420		15, 414		

***p<.001; ** p<.01;* p<.05.

Table 5: Effects of family orientation and organization and structure on innovation performance

	Family Orientation + Controls		Structure + Controls		All Variables		All Variables + Inter-action Terms		Δ R2 entered first/last
Explanatory Variables	β-value	*t*-value	β-value	*t*-value	β-value	*t*-value	β-value	*t*-value	
Control									.07*** / .01*
Age	-.00	-.70	-.00	-.98	-.00	-.86	-.00	-.88	
Firm Size	-.45***	6.71	..28***	3.43	.26**	3.00	.25**	2.94	
Family Orientation									.01*** / .01**
Family	-.08**	-3.14			-.07**	-2.78	-.03	-.36	
Structure									.11*** / .05***
Standardization			-.04	-.95	-.05	-.96	-.05	-.96	
Self coordination			.06	.63	.05	.49	.05	.49	
Team coordination			.08	.72	.11	.94	.11	.95	
Decentralization			.10**	3.03	.09**	2.57	.09*	2.51	
Departmentalization			.20***	3.64	.20***	3.55	.20***	3.55	
Specialization			.30**	3.07	.30**	3.04	.31**	3.04	
Interaction terms									--/.00 (last)
Family X Standardization							-.01	-.62	
Family X Self coordination							.01	.36	
Family X Team coordination							.01	.21	
Family X Decentralization							.00	.11	
Family x Departmentalization							.01	.56	
Family x Specialization							-.00	-.05	
R-square	.08		.12		.13		.13		
Adjusted *R*-square	.08		.11		.12		.11		
F-Statistic	22.48***		12.94***		12.20***		7.32***		
DF	3, 751		8, 770		9, 745		15, 739		

***p<.001; ** p<.01;* p<.05.

Figure 1: Proposed Model: Influences of Family Orientation on Performance

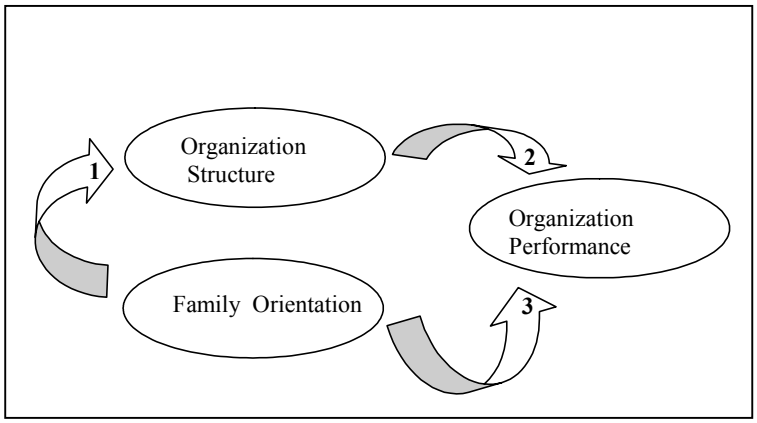

Figure 2: Questions used for variables in the study

Variable	Question	Scale used
Sales growth:	Percentage growth of sales between 2001 and 2002	
Innovation performance*:	Has the company introduced new products, services or production processes to the market in the last 3 years? Has the company introduced new products or services to the market in the last 3 years? Has the company adopted improvements or innovations of the business processes, in the last 3 years? (1='yes', 2='no')	(a higher score=more innovation performance)
Profitability (log)	A variable was created that averaged the log of the return on sales for 2001 and 2002	(a higher score =more profit)
Firm size:	Logarithm of the average between the number of employees in 2001 and the number of employees in 2002	
Age:	Number of years the company has been in existence	
Family orientation*:	A variable was created that combined the following questions: -For how may generations does the owner's family own the company? -How much influence do members of one family, not in charge, on the culture and values? -What are the plans of the owner on the long term? -Is the general manager family of the owners of the company? -What is the probability that the management goes to a member of the family of the owner(s)? - To which extent do members of one family control the general strategy/direction of the company? -Do you see this company as a family company? (7 items)	(A higher score = more family oriented)
Structure		
Departmentalization*:	A variable was created that combined four questions: - whether the jobs are ordered to product or service, - whether jobs are ordered in customer groups, - whether jobs are ordered in geographical areas, - whether there are different departments inside the company. (4 items)	(A higher score = more departmentalized
Decentralization*:	A variable was created that combined the degree to which employees, not belonging to the management, have influence on strategic decisions, influence on operational (daily) decisions, and the degree to which they make such strategic and operational decisions themselves (4 items)	(A higher score = more decentralized)
Standardization*:	A variable was created that combined: -The order of the jobs that is known in advance -The desired result of work of the employees that is specified in advance -The consultation that is done by prescribed rules and prescriptions -The work and procedures that are written down (4 items)	(A higher score= more standardized)
Team coordination:	Does the adjustment ('gearing') of jobs take place by informal consultation between employees? (1 item)	Higher score-more team coordination
Specialization:	Does each employee perform a number of specific jobs? (1 item)	Higher score-more specialized
Self coordination:	Do the employees control their work by themselves? (1 item)	Higher score=more self coordination

*Categorical Principal Components Analysis was used to create the structure items, each has a Cronbach's alpha larger than 0.8.