

# **Strategic Orientation and Innovation Performance Between Family and Non-Family Firms**

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**A paper presented at the 48<sup>th</sup> World Conference of the International Council of Small Business, June 2003, Belfast.**

## **Abstract**

A key concern in the family business literature is whether family firms differ from professionally managed firms. Some studies have found that there are no significant differences, whereas others have found that family firms differ from non-family firms in a number of key areas such as strategic posture. As such, this study examines the innovation performance between family and non-family enterprises, and expands our understanding of family firms by examining innovation in relation to strategy, organizational structure, and environmental hostility. Participants involve a random stratified sample of 2,000 small and medium size family and non-family owned businesses in manufacturing and service industry sectors in Australia. Using structural equation modeling (SEM), our findings reveal significant differences between family and non-family owned businesses on process innovation and strategic orientation. Notably, SEM estimates indicate that family firms are less innovative, emphasize industry leadership less, but have a greater prospecting orientation than non-family firms. SEM results demonstrate good fit for the hypothesized model ( $\chi^2 = 22.86$ ,  $df = 6$ ,  $p < .001$ ; GFI = .969, AGFI = .893), and provide support to the hypothesized relationships between strategic orientation and innovation performance, and between strategic orientation and organizational structure. Findings from this study demonstrate that family and non-family owned firms not only differ in their innovation performance, but they also have different strategic orientations, which provide some support to findings that family businesses put less emphasis on industry leadership. Given that new product and service development is generally considered important for understanding a firm's entrepreneurial activities, this study assists in increasing our understanding of firm-level entrepreneurship and innovation.

**Key Words:** Family business, non-family business, innovation performance, strategic orientation, organizational structure, environmental hostility, structural equation model.

## **Introduction**

Entrepreneurial firms are typically thought of as small (Aldrich & Austen, 1986), in many cases family-owned (Brockhaus, 1994), fast-growing (Drucker, 1985), and innovative (Backman, 1983). A distinguishing characteristic of an entrepreneurial firm is its strong commitment to creating and introducing new products or services to the market, usually well before the competition (Covin & Slevin, 1991). Thus Miller (1983) defines an entrepreneurial firm as “one that engages in product-market innovation, undertakes risky ventures, and is first to come up with proactive innovations, beating competitors to the punch” (p.771). Such firms use new products or services to achieve growth, profitability, significant market share, higher prices, and to establish industry standards, highlighting the importance of new product or service development to the understanding of a firm’s entrepreneurial activities. Therefore, identification of the factors that influence innovation helps to increase our understanding of firm-level entrepreneurship and performance.

How family firms differ from professionally managed firms has been a key concern of numerous studies. Some argue there are no significant differences (Daily & Thompson, 1994), whereas others have found that family firms differ from non-family firms in certain key areas. For example, Dreux (1990) and Chami (1998) argue that family enterprises are complex entities because of their administrative and governance systems, which stem from the business and family systems. Moreover, family and non-family firms have been found to differ with respect to patterns of influence, organizational climate, and organizational processes (File, Prince, & Rankin, 1994). In addition, family firms have been determined to be more stable and conservative (Donckels & Fröhlich, 1991); show slower growth and less participation in global markets (Gallo, 1993); but tend to have a long-term commitment horizon (Harris, Martinez, & Ward, 1994).

As the importance of family business has become more recognized, eminent researchers in the field (e.g., Wortman, 1994; Brockhaus, 1994) have called for rigorous investigations that consider issues beyond succession, which has captivated most of the research interest. It does not appear that there have been attempts to determine whether family and non-family businesses differ

in their processes of innovation. Daily and Dollinger (1992) found that in family-run firms, leaders are focused on family-centred issues. In contrast, other research suggests that because of their private ownership, family firms can take unusual market risks that publicly held companies are unable to take. As such, this study aims to identify the processes of innovation between family and non-family enterprises.

The primary objective of this study is to assess the processes of innovation in family owned companies and contrast these processes with non-family owned firms. There is an abundance of literature that expounds on the importance of creativity and innovation to keep organizations healthy, viable and competitive, but few studies have focused on the organizational characteristics that lead to innovation and its relationship to firm performance. This proposed study attempts to expand our understanding about the business dimension of family firms by examining the processes of innovation and its relationship with performance and business practice. There is conflicting evidence as to whether a tight hold by family members of senior management positions can become an obstacle to innovation and organizational success (Dunn, 1995). Some theorists even deem family involvement in an enterprise as antithetical to effective business practices, leading to non-rational behaviour (Dyer & Handler, 1994). As such, this study offers valuable insights into the processes of innovation in family owned enterprise and thus will benefit both the research literature and practice.

### **Theoretical Rationale and Hypotheses Development**

Organisational theories such as contingency (i.e., where factors such as environmental uncertainty, production technology, and strategy influence management structures and processes) and resource dependence (i.e., where scarce and valued resources impact on organisational survival) argue that firm survival depends on the ability to adapt successfully to a changing environment. To ensure survival, organizations formulate appropriate strategies, and devise ways to implement and achieve these strategies. Within this framework, Ward (1988) argues that the strategic orientation of family

owned businesses differ from non-family owned enterprises *because the family firm must incorporate family issues into its thinking* (p.105). Similarly, Harris et al. (1994) maintain that families in family owned enterprises influence every step of the strategic management process.

These views take a systems approach to family enterprises, whereby the family, business, and ownership subsystems are shown to be important and interconnected. However, there is little empirical evidence that provides support for this viewpoint, particularly with regard to strategic management and innovation processes. Little is known whether family considerations and interests influence the family firm's strategic orientation and their ability to innovate, and whether these processes differ across firm type. Indeed, Sharma et al (1997) believe that comparative research on these processes between family and non-family owned enterprises will lead to an understanding of how differences of the family's influences affect performance and which coping mechanism are used by high- and low-performing firms.

Organisational researchers (e.g., Berle & Means, 1932; Demsetz, 1983; Demsetz & Lehn, 1985; Fama, 1983) similarly argue that distribution of ownership and control in firms has important implications for strategic development and organisational efficiency. Indeed, Daily and Dollinger (1992) observed that, compared with professionally managed firms, family businesses reflect structural, process, and strategic differences. In an analysis of European case studies, Dönckels and Fröhlich (1991) found that family businesses are more risk averse, less growth oriented, need fewer socio-economic networks, and generally are more conservative in their strategic behaviour than non-family firms. As well, Daily and Dollinger (1993), while testing Miles and Snow's (1978) strategy typology, reported that family business owners could be categorised as defenders, while non-family business owners are more likely to be classified as reactors. However, in relation to strategic posturing Daily and Thompson (1994) noted non-significant differences between family and non-family owned businesses. Similarly, Gudmundson, Hartman, and Tower (1999) found no strategic orientation differences between family and non-family businesses, whereas they reported differences between how family and non-family firms compete in the market place. Family firms

place less emphasis on industry leadership in consumer markets but place more emphasis on industry leadership in business markets than non-family firms.

This evidence suggests that external environmental factors as well as internal firm structures and processes have important influences on development of strategies and on how family and non-family owned firms respond to both internal and external circumstances. Indeed, Ward (1988) argues that family firms shape business strategy in ways that other enterprises do not need to consider, suggesting that business and family plans are interdependent. Hence, decisions relating to internal functioning are often strategic in nature (Eisenhardt & Zbaracki, 1992), suggesting that product and process innovation as well as strategic orientation are important to firm success and survival. This view also advocates that internally sound enterprises are more able to construct and implement both internal and external strategies than their counterparts. Thus, this study examines the conjecture that family firms differ on strategic orientations and innovation processes.

**Family Business: A Definition.** There is general agreement in the family business literature *that a business owned and managed by a nuclear family is a family business* (Chua, Chrisman, & Sharma, 1999, p.22). Chua et al. (1999) maintain that the family component directly shapes and influences businesses' goals and strategies, and it is these attributes that distinguish family enterprises from other firms. As a comparison, Litz (1995) proposed that: *a business firm may be considered a family business to the extent that its ownership and management are concentrated within a family unit, and to the extent its members strive to achieve and/or maintain intra-organisational family-based relatedness (p.103)*. For the purposes of this research, a family business is defined as one in which owners regard their enterprises as a family firm and when any one of the following three criteria hold true: 50% or more of the ownership is held by a single family; a single family group is effectively controlling the business; and a significant proportion of the senior management is drawn from the same family. These criteria are similar to those employed by Stoy Hayward and the London Business School (1989, 1990).

**Innovation: A Definition.** In reviewing the literature on innovation, various definitions have emerged from different perspectives. From a diffusion theory perspective, Rogers (1983) defines innovation as an idea, practice, or object that is perceived as new by individuals or units that adopt it. From a broader scope, Damanpour (1991, p. 556) defines innovation as “the adoption of an internally generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organisation”. Other definitions on innovation appear to emphasise a business orientation. For example, Higgins (1995, p. 33) defines innovation as “the process of creating something new that has significant value to an individual, a group, an organisation, an industry, or a society”. More specifically, he suggests that innovation is the process of taking new ideas effectively and profitably thought to satisfied customers.

Carnegie, Butlin, Barratt, Turnbull, and Webber (1993, p.3) define innovation as “something that is new or improved and done by the enterprise to create significantly added value either directly for the company or indirectly for its customers”. Thompson (1993/1994, p. 2] defines innovation as “the ability to provide products and services differentiated from the competition and made profitable by their value to their customer”. From several definitions above, a common platform for defining innovation can be derived based on two key words: newness, which also implies being different from the rest, and values (or benefits) for customers.

**Innovation as Competitive Advantage.** Research evidence has shown a strong relationship between product innovation and market performance (Narver, 1990). The need for managing innovation is driven by several factors surrounding organisations as exemplified by several following arguments. Tidd et al. (1997) affirm that in the case of more mature and established markets, competitive sales growth comes not simply from being able to offer low prices but also from a variety of non-price factors, such as design and customisation. Likewise, product differentiation based on superior quality or other factors is associated with higher than average profitability, but products which are differentiated on both quality and other features achieve twice the normal return on investment. The ability to develop new products is even more important when

the environment is changing constantly and rapidly (Tidd, 1997). Companies need to recognise that customers may have changed in their socio-economic status, thus shifting their expectations as well as their buying behaviour. Competitors, at the same time, may introduce new products using new technology that changes the relative position of the players in the market place.

**Product and Process Innovation.** Given various dimensions of innovation, researchers have attempted to make a classification on innovation. Among various ways to categorise innovation, product innovation and process innovation would appear to be central in innovation studies (Abernathy, 1988; Tushman, 1986; Zairi, 1995; Tidd, 1997; Huiban, 1998; Sciulli, 1998). The distinction between product innovation and process innovation is also reflected in the way scholars define the term “innovation” itself. Brown and Eisenhardt (1995), for example, suggest that innovation is concerned with the issue of new product development. The innovativeness of a firm, therefore, is assessed from the point of view of generating new product in relation to commercial purpose, in addition to the adoption of new technology or knowledge. In studies of innovation related to strategy and marketing, innovativeness is defined as the ability of a firm to introduce new products and/or production processes in order to capitalise a marketplace opportunities (Ozsomer, 1997). On the other hand, several studies have focused on the adoption of new technology emerging in the industry by firms in order to improve their processes (Subramanian, 1996; Sciulli, 1998). The distinction between product and process innovation, however, does not imply an exclusive relationship between them, because, as Tidd et al. (1997) argue, in reality, what stems from process innovation could appear to be a new product in the marketplace as much as being construed as product innovation. Nevertheless, we believe that such a distinction would be useful in capturing the scope of innovation in a more comprehensive way than if it relies only on either aspect (i.e. product or process).

**Innovation, Structure, Strategy, and Environment.** Research on innovation has been focused on three levels of scope: industry level, organisational level, and project level. At industry-level, innovation is concerned with the development of new scientific technology and the patterns

of its diffusion across industrial sectors or even countries impacted over time (Abernathy, 1988). Despite its importance, when referred to industry level innovation is very much beyond organisational control and, therefore, difficult, if not impossible to be managed. At the project level, innovation is concerned with specific projects for product development or installation of new technology. The problem with project-level is that the performance of individual projects can be influenced by many idiosyncratic factors that may be difficult to duplicate from project to project. As a result, the success of an individual project may not be indicative when it is used to measure organisational performance (Ittner, 1997). At organisational level, the study of innovation is focused on the structure and processes by which organisations adopt or produce innovation, and what actual practices employed in the management of innovation (Brown, 1995). In this section, the review of past studies on innovation is focused on organisational level, which is the scope of this study as well as what Wolfe (1994) identified as Organisational Innovativeness (OI) research. In his review, OI research has some specific characteristics that differentiate it from other streams. First, its objective is to answer the primary question: what organisational characteristics determine organisational innovativeness. Secondly, its research model is a variance model, commonly characterised by a regression model, whose orientation is toward explaining the variance in some dependent variable. Thirdly, the data collection method usually employs cross-sectional survey.

The most classical study on innovation was focused on organisational structure as the determinant of innovation performance. This typical study was originally based on the work of Burns and Stalker (1961) where they identified two antagonistic characteristics of organisations which were classified as mechanistic and organic. Based on the organisations' pattern of adaptation to technological and commercial change, Burns and Stalker concluded that the organic- type organisations were more successful in adopting innovations rather than the mechanistic ones. Their work laid the foundation for subsequent studies on organisational innovation which examine the impact of organisational structure on innovation performance (Kim, 1980; Kimberley, 1981; Tornazky, 1982; Miller, 1982; Rogers, 1983; Ettlie, 1984; Dewar, 1986; Miller, 1986;

Subramanian, 1996; Sciulli, 1998). The most common organisational structural variables used in these studies were formalization and centralization. The higher the degree of both formalisation and standardisation, the more mechanistic the organisation is.

Innovation researchers have also examined the link between innovation performance and the strategy adopted by a firm by considering external factors, such as business environment. The theory underpinning this study was that an organisation will choose a specific strategy to respond towards the challenge of business environment where it operates (Khandwalla., 1977). The strategic choice will then be realised and implemented through an appropriate organisational structure (Chandler, 1962). This therefore builds a link between business environment, strategy, structure, and innovation performance. Ozsomer et al's. (1997) study examine this link by presuming that in environments where rapid change is a way of life it would seem that firms with the most aggressive strategic posture are more likely to survive, let alone stay competitive. Based on these findings, they conclude that strategic posture is a major determinant for innovativeness. A firm's choice of an aggressive, competitive, risk taking strategy apparently influences innovativeness in terms of the way the firms differentiate themselves from their competitors by changing their production methods and products. Furthermore, they also affirm that the firm's choice of a proactive and aggressive strategy leads to an organic and flexible model of organisational structure, suggesting the mediating role of organisational structure in explaining the relationship between organisational strategy and innovation performance of the firm.

**Hypotheses.** Given the above discussion on family businesses and innovation, the objective of this study is to examine structural relationships among innovation, structure, strategy and environment between family and non-family businesses, as illustrated in Figure 1. We adopt the model proposed and tested by Ozsomer et al. (1997), with the following two variations. While Ozsomer et al. (1997) measure organisational structure in terms of flexibility, we use a more classical approach of measuring organisational structure, that is, formalisation. Instead of using separate measures of environmental hostility and uncertainty we use a single measure for

environment that captures both hostility and uncertainty. The nature of both environmental hostility and uncertainty suggests that they are not separate unidimensional constructs and therefore the two measures were incorporated into a single environment construct.

Miles and Snow (1978) argue that high velocity environments lead to the adoption of a prospector strategic posture. Accordingly, we hypothesise the following:

*H1: Firms experiencing greater environmental hostility and uncertainty will adopt prospector strategic postures.*

As Miller (1988) argues, the adoption of certain strategies has many implications for organizational structure. For example, a firm that adopts an aggressive strategy needs to develop a structure which promotes open communication, decentralization, and informal decision making and flexible processes (Mintzberg, 1979). At the same time, innovation studies have identified decentralization and formalization as the key determinants of innovation performance. Linking these three variables (i.e. strategy, structure, and innovation), we hypothesise the following:

*H2: Firms demonstrating greater prospector strategic postures have less formalised organizational structures.*

*H3: Firms with less formalised organisational structures will have higher innovation performance.*

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**Insert Figure 1 about here**  
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### **Method**

**Participants.** A stratified random sample of 2,000 family firms was employed. One-thousand family owned firms that had less than 100 employees (manufacturers) or less than 20 employees (service industries) were selected from a database of family firms ( $N=2,200$ ) held by the Accounting & Finance Department at Monash University. A further 1,000 non-family-owned businesses were randomly selected from a database obtained from Dun & Bradstreet. These

businesses also met the same employee/size criteria for manufacturers and for service-based enterprises. A four-page self-completion survey instrument was mailed to business owners in September 2002 with an accompanying letter explaining the purpose of the study. Questionnaires were returned in stamped, self-addressed envelopes. The valid response rate was 13.10% ( $n=236$ ), after allowing for return-to-senders ( $n=196$ ) and blank responses ( $n=4$ ).

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**Insert Table 1 about here**  
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Tests for both response and common method bias were performed on the full complement of responses. First, an independent samples *t*-test was conducted to compare very early (i.e., first 135 responses from mail-out) and very late (i.e., last 107 responses from mail-out) respondents on the basis of gross sales and net income. The hypothesis that the two groups were drawn from the same population was not rejected,  $t(216) = 0.95$ ,  $p = .342$  and  $t(199) = 1.58$ ,  $p = .116$ , respectively.

In addition, since we used self-report questionnaires, and assuming one person completed the measure, tests for potential common method bias were conducted. To demonstrate independence among the conceptual dimensions of the various measures, items comprising innovation, structure, strategy, and hostility were submitted to principal-axis factor analyses (Podsakoff & Organ, 1986). Kaiser's criterion for retention of factors was followed.

Varimax rotations yielded six clearly interpretable dimensions for all above mentioned instruments, with no overlap between the six measures. Thus, we can conclude that response and common method variance biases are not a threat to the validity of our results.

**Measures.** The Australian Innovation Questionnaire comprises 6 sections: Innovation, Competitive Environment, Competitive Advantage, Decision Making, Business Orientation and Background on Business. Where appropriate, all items were measured on 5-point Likert scales (see Table 2 for reliability coefficients, and Appendix A for operationalization of variables).

***Innovation Performance.*** Extant organizational research reveals numerous variations have been used to measure innovation performance of organizations. To comprehensively capture the varied aspects of innovation performance, this study adopts Prajogo and Sohal's (2003) measure. These criteria are the number of innovations, the speed of innovation, the level of innovativeness (novelty or newness of the technological aspect), and being the 'first' in the market. These four characteristics of innovation were transposed into two major areas of innovation, namely product innovation and process innovation. Conceptually, product innovation is concerned with generating ideas or the creation of something entirely new that is reflected in changes in the end product or service offered by the organization, while process innovation represents changes in the way firms produce end-products or services through the diffusion or adoption of an innovation developed elsewhere (Zhuang, 1999; Tidd, 1997) or new practices developed internally.

***Structure.*** Hage and Aiken's (1967) measure of formalization was adopted to measure organisational structure. Hage and Aiken (1967:79) defined formalization as "the use of rules in an organisation" and they used two subconstructs to measure this concept: *Job Codification* (the degree to which job descriptions are specified); and *Rule Observation* (the degree to which job occupants are supervised in conforming to the standards established in job codification). The researchers later added another subconstruct, *Job Specificity* (the degree to which procedures defining jobs are spelled out) to their overall measure of formalization. Formalization demonstrates adequate reliability ( $\alpha = .87$ ).

***Strategy.*** Gudmundson et al's (1999) strategic orientation measure was adopted for this study for two reasons: First, it takes into account the multidimensional nature of strategy and uses 12 items to gauge both the "prospector" and "leader" orientation of firm owners; Second, it was used on a sample of family firms in the US. The strategy sub-dimension "prospector" shows adequate reliability ( $\alpha = .74$ ), whereas "leader" strategy shows inadequate reliability ( $\alpha = .57$ ).

***Hostility.*** The hostility measure was adopted from the Australian Bureau of Statistics (ABS, 1998), which was used in a national study of innovation among SMEs. Instead of using

separate measures of environmental hostility and uncertainty we use a single measure for environment that captures both hostility and uncertainty. Hostility reflects low reliability ( $\alpha = .64$ ).

**Dimensionality of Measures.** Twenty-five items making up six constructs of the innovation model were evaluated for unidimensionality and reliability. A unidimensional factor comprises items that share a similar trait or concept. Congeneric measurement models using LISREL's (8.52) maximum likelihood procedure were produced by allowing each item to respond to its underlying concept (Jöreskog & Sörbom, 1989).

The six congeneric measurement models produced goodness of fit indices that are almost equal to unity, and all items (except for one item each in leader strategy and hostility) reflect lambda ( $\lambda$ ) loadings greater than .50 (i.e., *product innovation* .77 to .82; *process innovation* .76 to .92; *structure* range from .76 to .90; *prospector strategy* range from .51 to .81; *leader strategy* range from .37 to .85; and *hostility* .34 to .90). An additional confirmatory factor analysis of six hypothesized constructs reveals significant loadings for all hypothesized measures on their respective dimensions as well as good fit,  $\chi^2(260, N = 242) = 295.65, p = .063$ , GFI = .937, AGFI = .921, RMSR = .08. These results suggest that items are unidimensional. Construct reliabilities for *product innovation* (.76), *process innovation* (.82), *structure* (.80), *prospector strategy* (.70), *leader strategy* (.66), and *hostility* (.61) also indicate sound operationalization of measures (Hair, Anderson, Tatham, & Black, 1998).

Furthermore, a series of confirmatory factor analyses provides evidence of discriminant validity of measures using chi-square difference tests (Anderson & Gerbing, 1988). Measures of different constructs, such as process and product innovation and prospector strategy and leader strategy, were forced into a single underlying factor. For each pair of measures examined, this procedure resulted in a significant deterioration of model fit relative to a two-factor model. These results provide further evidence of discriminant validity. Table 2 presents correlations of measures, reliability coefficients, means, and standard deviations.

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**Insert Table 2 about here**  
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## **Results**

**Overall Model Evaluation.** The hypothesized structural equation model was examined using covariance matrices and LISREL's (8.52) maximum likelihood procedures. Covariances, using listwise deletion of missing data, were computed. The full structural equation model encompasses both measurement and structural relationships. The measurement component of the model shows that product innovation and process innovation are assessed by four items, structure and prospector strategy by five indicators, leader strategy by three items, and environment by four indicators.

Structural components of our model (see Figure 2) indicate that the endogenous variables prospector strategy ( $\gamma = -.08$ ,  $p > .05$ ) and leader strategy ( $\gamma = -.03$ ,  $p > .05$ ) are negatively and insignificantly influenced by the exogenous variable environmental hostility, which leads to the rejection of H1. However, the direction of the impact suggests that in hostile environments family and non-family business owners tend to adopt prospector and leader postures. In such environments, owners act in an aggressive manner by either adopting new product innovations or by initiating actions that improve their competitive position.

However, the endogenous variables prospector strategy ( $\beta = .15$ ,  $p < .05$ ) and leader strategy ( $\beta = .25$ ,  $p < .05$ ) both positively and significantly influence organisational structure, providing contrary support to H2. As our sample of firms is by and large owner-managed, centralized decision-making and formalized procedures are a common phenomenon due to owners having higher personal stakes in their firms' future, which compels them to direct and control the day-to-day management processes. Nevertheless, the positive impact of strategic posture on organisational structure supports the notion that strategy precedes structure (see Chandler, 1962; Miles & Snow, 1978).

As expected, the endogenous variables prospector strategy ( $\beta = .24, p < .001$ ) and leader strategy ( $\beta = .51, p < .000$ ) both positively and significantly influence innovation, but organisational structure ( $\beta = .12, p > .05$ ) has an insignificant impact on the firm's innovativeness, providing no support to H3. These results provide some support to Ozsomer et al. (1997), who found that a prospector strategic posture strongly influences innovation, whereas organisational structure has a moderate effect on the firm's innovation performance .

Three criteria (i.e., absolute, incremental, and parsimonious fit measures) assess acceptability of the hypothesized model (see Figure 2). The independence model that tests the hypothesis that variables are uncorrelated with one another is rejected,  $\chi^2 (15, n=242) = 287.21, p < .000$ . A chi-square difference test indicates a significant improvement in fit between independence and hypothesized models, with the hypothesized model yielding the following results:  $\chi^2 (6, n=242) = 22.86, p < .001, GFI = .969, AGFI = .893$ . These results indicate acceptable fit to observed data and provide sound support for hypothesized model relationships (see Table 2, Panel B). Figure 2 shows results for the hypothesized structural equations model.

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**Figure 2 about here**  
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**SEM Multiple Group Comparisons.** As a primary objective of this study was to examine whether findings are invariant across family and nonfamily businesses, between- and within-group models were specified using LISREL's multi-sample feature (see Table 2, Panel C). Multi-sample analyses are used to address issues relating to levels and to assess whether structural relations estimates differ significantly across groups (see Klein, Dansereau, & Hall, 1994). To this end, we imposed equality constraints on both covariances and structural paths across family and nonfamily firms.

SEM within-group indices reveal that the model fits well for both family (GFI = .99) and non-family (GFI = .98) enterprises. A significant chi-square value for the unconstrained and constrained simultaneous between-group analyses ( $\Delta\chi^2_{(8)} = 20.83, p < .01$ ) indicate statistical non-equivalence when conducting tests of equality of covariance and path structures across groups, suggesting that innovation performance differs across family and non-family enterprises for the hypothesized relationships.

Results indicate that strategic posture has a significant effect on innovation performance for both family ( $\beta = .57, p < .01$ ) and non-family businesses ( $\beta = .81, p < .01$ ), whereas organisational structure has an insignificant effect on innovation performance for both ownership types ( $\beta = .17, p > .05$  and  $\beta = .16, p > .05$ , respectively). Strategic posture has no significant effect on organisational structure for family businesses ( $\beta = .28, p > .05$ ), but has a significant on organisational structure in non-family businesses ( $\beta = .31, p < .10$ ), whereas environmental hostility has no significant influence on strategy for both types of firms ( $\beta = .44, p > .05$  and  $\beta = -0.06, p > .05$ , respectively). These results provide further evidence that family business owners are more risk averse and generally are more conservative in their strategic behaviour than non-family firms.

### **Discussion**

This paper has provided an analysis of factors affecting the innovation performance of family and non-family enterprises and demonstrates that strategic orientation is an important determinant of innovation performance for both types of firms. Notably, our results indicate that family firms are less innovative, emphasize industry leadership less, but have a greater prospecting orientation than non-family firms. Gudmundson et al. (1999) similarly found that family businesses emphasize a higher prospecting orientation, though they also found that family firm owners emphasize higher industry leadership when selling to consumer markets. Our SEM results demonstrate good fit for the hypothesized model, but provide support only to the hypothesized relationships between strategic orientation and innovation performance, and between strategic orientation and

organizational structure. In contrast, the hypothesized relationship between prospector strategy and leader strategy provide contrary results, whereas organizational structure has an insignificant impact on innovation performance. Findings from this study demonstrate that family and non-family owned firms not only differ in their innovation performance, but they also have different strategic orientations, which provide some support to findings that family businesses put less emphasis on industry leadership. Given that new product and service development is generally considered important for understanding a firm's entrepreneurial activities, this study assists in increasing our understanding of firm-level entrepreneurship and innovation.

Findings of the present study should be considered in light of two limitations. First, data are not adequately representative of SME businesses in Australia and caution should be exercised in generalizing findings to these firms. Second, two of our six measures reflect poor internal consistency coefficients, suggesting that our model is not adequately capturing the constructs of leadership strategy and hostility.

Family business research is in its infancy and future research might provide greater insight into the innovation processes of these firm by considering the impact of additional distinguishing family business variables such as more sophisticated measures of strategic planning, strategy formulation, and goals and objectives. The purpose of this study was to fill a gap in the family business literature by providing a framework for further analysis into the strategic orientation and posture of these types of firms. While findings indicate that the innovation performance and strategic posture of family and non-family owned businesses differs, further research is required to understand relationships between family considerations and interests, and strategy.

## **References**

References can be obtained from the first author on request.

## **Acknowledgement**

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<sup>b</sup>Professor, Department of Management, Monash University. This research was funded by the

Faculty of Business and Economics Research Grant, Monash University. We gratefully acknowledge their support.

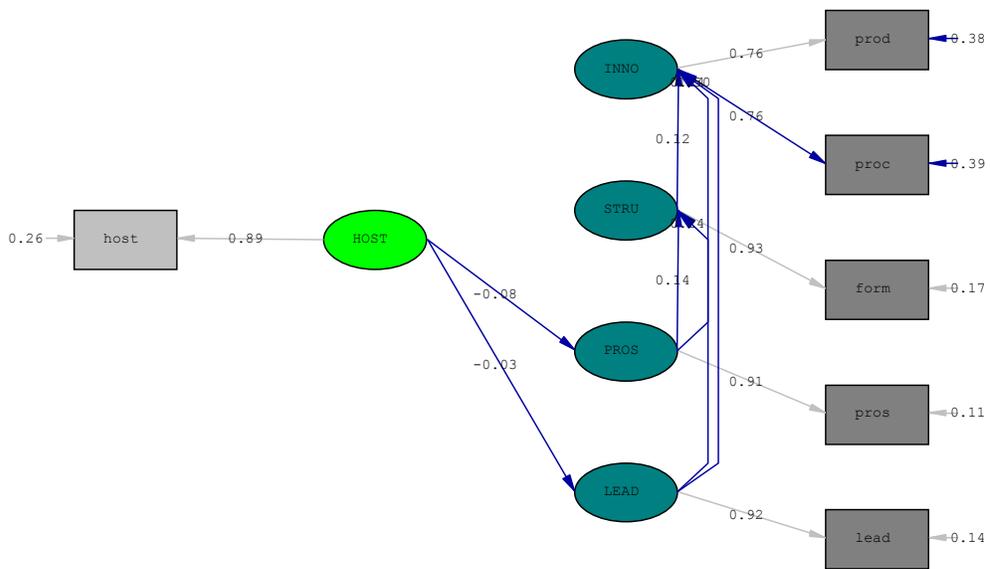


Figure 1. Hypothesised Innovation Model

**Table 1. Family business and owner background characteristics**

	<b>Aus</b>
<b>Family Business</b>	
Yes	153 (64.6%)
No	84 (35.4%)
<b>Ownership</b>	
>50% Ownership One Family	146 (60.6%)
>50% Ownership Two or More Families	0 (0.0%)
Family Has Control or Provides Management	51 (21.2%)
Family Business Publicly Owned	4 (1.7%)
None of the Above	40 (16.6%)
<b>Generation Managing Business</b>	
1 <sup>st</sup> Generation	146 (67.6%)
2 <sup>nd</sup> Generation	54 (25.0%)
3 <sup>rd</sup> Generation	11 (5.1%)
4 <sup>th</sup> Generation	5 (2.3%)
<b>Industry</b>	
Retail & Wholesale Trade	41 (17.0%)
Manufacturing	110 (45.6%)
Technology	18 (7.5%)
Finance, Property, Business Services	13 (5.4%)
Primary	7 (2.9%)
Recreational	2 (0.8%)
Personal and Other Services	6 (2.5%)
Transport and Storage	8 (3.3%)
Construction	14 (5.8%)
Other	22 (9.1%)
<b>Age of Firm</b>	
<i>Mean</i>	28.9 years
<i>Median</i>	22 years
<i>Maximum</i>	148 years
<i>Minimum</i>	1 year
<b>Employment Full-Time</b>	
<i>Mean</i>	30.3
<b>Employment Part-Time</b>	
<i>Mean</i>	26.9
<b>Gross Sales</b>	
<i>Mean</i>	\$7.2 million
<i>Median</i>	\$3.3 million
<b>Market Value of Business</b>	
<i>Mean</i>	\$5.7 million
<i>Median</i>	\$1.6million
<b>Income as Percentage of Sales</b>	
<i>Mean</i>	14.8%
<i>Median</i>	10.0%
<b>Interest Rate on Overdraft</b>	
<i>Mean</i>	6.9%
<i>Median</i>	7.8%

**Table 2. Summary Statistics for Bivariate and SEM Analyses**

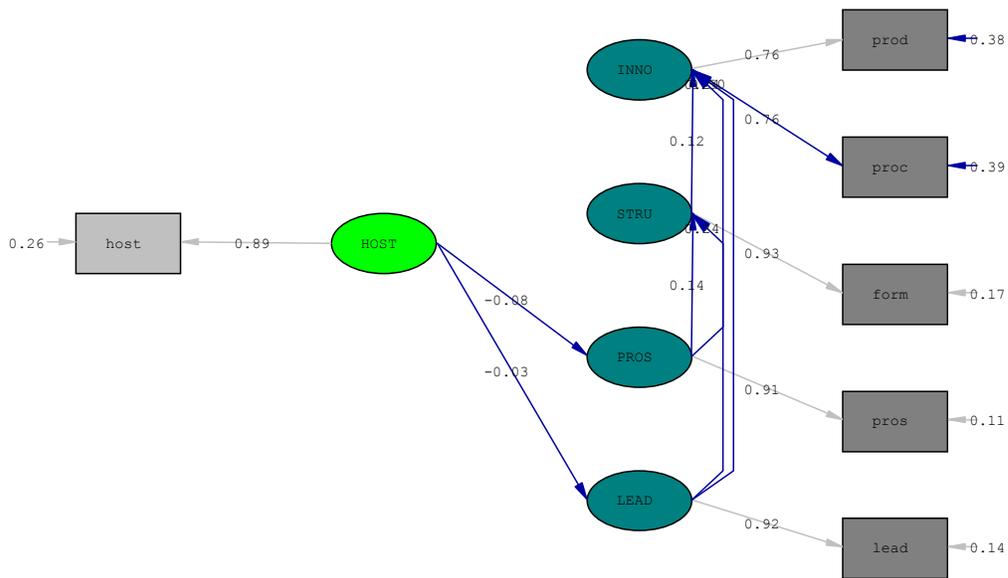
<b>Panel A. Correlations<sup>a</sup> between measures, reliabilities, means, and standard deviations</b>								
	2	3	4	5	6	$\alpha$	Mean	SD
<b>1. Product Innovation</b>	1.00					.82	3.60	0.78
<b>2. Process Innovation</b>	.64	1.00				.89	3.57	0.81
<b>3. Structure</b>	.21	.26	1.00			.87	3.17	1.10
<b>4. Prospector Strategy</b>	.34	.31	.17	1.00		.74	3.35	0.79
<b>5. Leader Strategy</b>	.45	.46	.17	.34	1.00	.57	3.42	0.82
<b>6. Hostility</b>	-.04	-.05	-.07	-.02	.06	1.00	1.47	0.84

Note. Correlation coefficients  $\geq .17$  significant at  $p < .01$ ;  $\geq .26$  significant at  $p < .001$  level.

<b>Panel B. Summary of Overall SEM results</b>		
<b>SEM model statistic</b>	<b>Hypothesized model</b>	<b>Independence model</b>
Chi-Square ( $\chi^2$ )	22.86	287.21
<i>p</i> -Value	.000	.000
Degrees of Freedom ( <i>df</i> )	6	15
Chi-Square/ <i>df</i>	3.81	19.15
Goodness of Fit Index (GFI)	.969	
Adjusted Goodness of Fit Index (AGFI)	.893	
RMSR	.076	
Normed Fit Index (NFI)	.918	
Relative Fit Index (RFI)	.965	
Parsimony Goodness of Fit Index (PGFI)	.277	
Expected Cross-Validation Index (ECVI)	.219	

<b>Panel C. Summary of goodness of fit information for between-group comparisons</b>					
<b>Group</b>	$\chi^2$	<i>df</i>	<i>p</i>	<b>NFI</b>	<b>CFI</b>
<b>Family versus Nonfamily business</b>					
Nonfamily business owners ( $n = 153$ )*	7.53	7	0.25		
Family businesses owners ( $n = 84$ )*	6.06	7	0.25		
Unconstrained between-group model	13.48	14	0.49	0.89	1.00
Constrained between-group model	34.31	22	0.05	0.69	0.82
$\chi^2$ difference (constrained-unconstrained)	20.83	8	.01		

\*Listwise deletion was used in the LISREL analyses. This procedure deletes all missing observations from analysis, hence the discrepancies in sample sizes.



Chi-Square=22.86, df=6, P-value=0.00084, RMSEA=0.108

**Figure 2. Family and Non-Family Business Innovation Model**