

## Corporate Governance and Management Succession in Family Businesses

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## **Corporate Governance and Management Succession in Family Businesses<sup>1</sup>**

### **Abstract**

Family businesses carry the weight of economic wealth creation in most economies. In the U.S. alone, family businesses account for 80 to 90 percent of the 18-million business enterprises in the United States, and 50 percent of the employment and GNP. In many ways, the family business is synonymous with the entrepreneurial organization as many were started as a means to provide for the financial well being of the founder's family. Founders who went on to build family empires started many of today's large corporations (e.g., Anheuser-Busch, Dupont, and Seagrams). Still, we know relatively little about the issues peculiar to a family business, such as the process and impact of succession planning. Yet, no recurring event in the life of the family firm is more critical to survival than the transfer of power from the incumbent to the successor. Organizations are especially susceptible to loss of vision and purpose during periods of CEO transition, as the leaders who helped shape the vision are replaced by others who may not share the same values and abilities. This study addresses the importance of understanding business succession planning by proposing and empirically verifying a model of succession planning and firm effectiveness in the family business. It links aspects of succession planning and successor preparation to the effectiveness of transition and from performance. The model depicts multiple interactive relationships, with emphasis placed not only on the planning and process-specific but also on successor-specific factors that lead to effectiveness.

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## **Corporate Governance and Management Succession in Family Businesses**

### ***Introduction***

Family businesses carry the weight of economic wealth creation in most economies. In the U.S. alone, family businesses account for 80 to 90 percent of the 18-million business enterprises in the United States, and 50 percent of the employment and GNP in the economy (Morris, 1997; Lansberg, Perrow and Rogalsky, 1988). In Canada, this figure is higher with 80% of the companies listed on the Toronto Stock Exchange closely held in family trusts or the founders' hands (Leighton and Thain, 1997). In Singapore and Hong Kong, the numbers are similar as many of the local business enterprises that have recently gone public were started by overseas Chinese entrepreneurs in the post-war period 40 years ago. In Taiwan the small and medium-sized family enterprise accounts for more than 98.5% of companies, 80% of employment and 47% of the total economy (*The Economist*, Nov 7 1998).

In many ways, the family business is synonymous with the entrepreneurial organization as many were started as a means of exploiting opportunity for wealth creation in order to provide for the financial well being of the founder's family. Many large global corporations today (e.g., Ford, Anheuser-Busch, Dupont, Acer Computer, Bata International, and Seagrams) were started by founders who went on to build family empires. Yet, the study of issues peculiar to the family business such as family/business interfaces and governance has not taken on the same level of importance as the more general entrepreneurship issues such as startup, growth, financing, etc. For example, we know relatively little about the process and impact of succession planning in the family business. Yet, no recurring event in the life of the family firm is more critical to survival than the transfer of power from the incumbent to the successor. Entrepreneurial organizations are especially susceptible to loss of vision and purpose during periods of CEO transitions, as the leaders who helped shape the vision are replaced by others who may not share in the same values or abilities (Fiegener, Brown, Prince and File, 1996). Combine this with the fact that CEOs of smaller firms face fewer constraints than those in large firms, their decisions have proportionately greater and more immediately impact on the firm, such that the potential for making or breaking the firm is greater (Haveman, 1993). Thus, an understanding of how entrepreneur successors are formally and informally prepared to assume leadership is critical to our understanding of success, which argues for a need to focus on corporate governance issues, with particular attention paid to management succession.

In the large public firm context, corporate governance is easily modeled as a response to the legal and fiduciary obligation of management as agents of the stockholder. Measures of CEO performance are thus unambiguous as they lead to shareholder wealth maximization. Incentives and disincentives are used to encourage the right types of behaviors so that here, succession is often viewed as a result of corporate governance discipline processes (Jensen and Meckling, 1976; Leighton and Thain, 1997).

Agency theory is used to explain succession as a by-product of the internal discipline mechanism whenever a CEO change is not the natural result of natural retirement, death or voluntary resignation of the incumbent. In the field of corporate governance, relatively little (compared to say, M&A research) has been studied on non-disciplinary CEO turnover. In a family firm theoretically modeling corporate governance is not so easy because the combination of ownership and control calls into question the applicability of such standard theories of governance as agency theory. In the family firm the principal, who also acts as his own agent, consumes the free cash flow. Such consumption can take the form of economically inefficient strategic decisions (such as favoring lower risk strategies) because considerations for the interests of the family and its stakeholders are routinely enmeshed with those of the business. Thus, studies of management succession in family firms represent a departure from traditional approaches, which use an agency, rational-adaptive or institutional theory view of succession as responses to the external environment (Bommer and Ellstrand, 1996).

It is needless to say that succession plays a central role in family businesses. Many writers consider it the most important issue in family-business management and of great strategic significance to family firms (Sharma, Chrisman, and Chua, 1997; Handler, 1994; Harris, Martinez, and Ward, 1994; Barach, Gantisky, Carson and Doochin, 1988). Past research suggests that only 30 percent of family firms survive into the second generation of family ownership, and 15 percent into the third (Morris, 1997). In Asia many such companies are still run by their founders but are increasingly facing the transition event. Heretofore, most studies on management succession have examined post-succession performance or the antecedents of the succession event (performance, strategic change, etc.) Within the family business, much less is understood of succession as a process because it is complex and typically involves individual, relational and organizational levels of analyses (Handler, 1989). For example, Handler (1991) examined at the impact of interpersonal relationships on succession in family firms and found that a key success factor in management succession is the level of mutual respect and understanding between current and next-generation family members. The level of complexity increases if one extends this simple intergenerational analysis to other stakeholders in the firm. There have also been few empirical studies done on succession *planning*, with the attendant antecedents and implications for corporate governance, strategy, effectiveness and performance. The process of succession planning in family firms is closely tied to estate planning and the discharge of family responsibilities perceived by company management. Therefore, in studying management succession in the family firm, one needs to focus on process, planning and the influence of the family. These three factors come together in the incumbent CEO/ founder. In an entrepreneurial firm, strategic decision-making rests with the CEO and/or founder of the firm. Therefore, the attitude that this person has towards succession planning is critical to the effectiveness of the process and whether the plan represents a reasonable approximation of the family's goals and objectives.

Miller (1993) points out that a new CEO is often less experienced than an incumbent simply because he lacks the networks and understanding of the business that accrue from being at the top of a hierarchy. The lack of experience will contribute to

more comprehensive information search at the beginning of a new CEO's tenure, and while such activities may create a better atmosphere for change, they detract from the CEO's short-term decision-making process. Thus, a CEO that has been 'groomed' to take over may be less disadvantaged by the lack of experience versus one that was not prepared in a similar manner. Furthermore, as a CEO becomes established, he would have built up the organizational networks and routines to ensure firm stability (Miller, 1993). These issues point to the importance of succession planning as an antecedent to promoting post-succession stability. In small firms, stability is advantageous in that it promotes the efficient use of already scarce resources. During a succession, these networks are threatened as the implied contracts between the CEO and various stakeholders are called into question. The early identification and grooming of incoming CEOs reduces the disruption of implied contracts and therefore promotes post-succession organizational stability.

In sum, this study argues for the importance of understanding the succession planning process in the family business by proposing and empirically verifying a model of succession planning and firm effectiveness.

### ***Literature Review***

In the literature, there has also been a noticeable lack of empirical studies on family businesses from a strategic point of view. Partly, this can be attributed to the fact that this is a relatively new research perspective. Traditionally, family business is an area where various business consultants – accountants, financial planners, estate lawyers, and insurance agents – have been active. Different professional organizations have conducted surveys and case studies aimed at improving family business practices, in particular those related to estate and succession planning. While these preliminary efforts serve as good exploratory research work for developing insights for future studies, their results and the recommendations based on them require rigorous empirical testing at the construct level in order to ensure the generalizability of these models.

Past research on succession has focused on the organizational and strategic antecedents of the event (White, Smith, Barnett, 1997). In addition, most studies have characterized succession as a discrete event at a point in time. Some of the questions asked in such studies have been on the impact of succession on post-succession performance (Carroll, 1984), the impact on organizational change (Tushman, Newman and Romanelli, 1986), the impact of CEO characteristics (Chaganti and Sambaryha 1987; Hambrick and Mason, 1984), and the impact on strategy (Smith and White, 1987; Helmich, 1974; Wiersema and Bantel, 1993). There has been less attention paid to succession as a transition process over a period of time. This approach is particularly salient in the context of the governance of the family firm. Given that organizational strategy and family concerns are often intertwined in a family firm, critical decisions that impact the growth and continuation of the firm cannot be divorced from considerations of the founder's goals for the family.

Thus far, the family-business literature has been descriptive rather than normative and has focused on the nature, and characteristics of succession rather than the causes of failure or success. According to a recent review article, which lists about one hundred studies on the strategic management of family businesses, virtually no attention was paid to the determinants of post-succession economic performance (Sharma, et al, 1997). Recently, Handler (1994) identified “characteristics of effective successions” as one of the five main streams of research on succession. Effectiveness was defined as the smoothness of the transition rather than in terms of performance. In the literature, only one empirical study attempted to make the link between succession and firm performance (Morris, 1997).

Where the literature has tended to treat succession as a process rather than as an event, life cycle models have often been used, suggesting that the succession process is part of the growth process of the firm. Churchill and Hatten (1987), for example, proposed a life-cycle framework for the succession process between father and son in a family business. Similarly, Handler (1990) describes the succession process as one of mutual role adjustment between two generations. Studies like these place significant emphases on inter-generation relations without necessarily identifying the consequences of such relationships. The assumption seems to be that healthy family relationships will automatically translate into the smooth transfer of power and wealth, and, in turn, will naturally lead to good post-succession firm performance.

### Succession Planning

Business founders often have difficulty giving up what they have created (Churchill and Lewis, 1983; Dyer, 1986; Kets de Vries, 1985). Duffy and Stevenson, (1984) posit that succession planning is in direct conflict with the entrepreneur’s needs for control, power and meaning. In that study, they found that 48.9% of Harvard-educated entrepreneurs did not plan on retiring while a further 23.3% did not know when they would retire or even if they would retire after 65. Although studies show that the founder generally assumes and desires that his sons will someday take over the management of the business, there is seldom any formal plan in place for the son to eventually takeover (Berenbein, 1984; Ward, 1987; Handler, 1989). In many cases, founders fail to prepare for succession by simply ignoring the need to explicitly choose or groom a successor (Schein, 1985). The entrepreneur’s resistance to succession planning is illustrated by Atchley’s (1989) study on retirement. Retirement is threatening because it represents a change from the continuity of one’s daily routine (Sonnenfeld, 1988; Sheppard 1976). Thus, there appears to be a contradictory phenomenon in which the founder appears to have a desire to see the business continue after him, but refuses to acknowledge that there will be indeed an endpoint to his career and thus ignores the need to plan for it. Perhaps this dynamic accounts for the, oft-quoted, statistic that most businesses do not survive to the next generation and very few make it to the third (Morris, 1997).

It has been generally assumed that one of the most significant factors determining the continuity of the family firm is whether the succession is planned and how well it is planned (Kirby and Lee, 1996). Traditionally, these issues tend to be treated as either

processual or structural phenomena. There has been no research that has systematically considered both. For example, there seems to be a consensus that good succession planning includes a comfortable time horizon for the transition between generations. Schulman (1991) and Zaudtke and Ammerman (1997) suggest that families start planning for the transfer of ownership and managerial responsibility *five to twenty* years in advance of the anticipated event.

Recommendations on how the successor should be appointed vary but most suggest that the decision not be the founder's alone, and that some type of planning team be created to oversee the process (Applegate, 1994; Sharma, et al., 1997). Jaffe (1993), Davis (1992), and Osborne (1991) advocate the use of a board of advisers populated with outside directors, or at least a family council, in order to shift the burden of decision-making from a single person to the group, thereby attenuating bias and increasing objectivity.

Schulman (1991) and Fox, Nilakant, and Hamilton (1996) emphasize the need for candid, open communication using formal and informal family get-togethers throughout the succession planning process. They further recommend that such communication extend beyond the incumbent and successor to include the constructive participation of key stakeholders. While such conventional wisdom may have oversimplified the complexity of the issue, there should be no doubt that an "open policy" differs significantly from a "closed-door approach" in terms of personal emotions, family relations, and the smoothness of transition.

From the standpoint of implementing the succession process, whether a succession plan is written or not makes a difference. In 1995 *Life and Health Insurance Sales* conducted a large-scale survey of family business owners across the United States and found that 53% had written estate plans, while only 28% had written succession plans. The survey also revealed that lawyers were more involved as experts than accountants. Other researchers have mentioned the need for a shareholder's agreement to balance management, ownership, and family interests (Schulman, 1991). Such agreements, often with buyout clauses, reduce the possibility of future disputes during transition among major shareholders, and ensure the longevity of the firm (Magrath, 1988). Similar to shareholders' agreements, estate plans have been advocated by Zaudtke and Ammerman (1997). Estate plans are aimed at mitigating any tax and financial impacts on the firm resulting from the death of the owner. Such plans often include a personal component dealing with the financial future of the owner himself. It has been suggested that one of the reasons of resistance to succession planning is the owner's sense of insecurity, stemming from not having a clear post-succession income plan (Aronoff and Ward, 1992).

The succession planning process is lengthy, complicated, and is not only emotionally challenging, but also expensive. One account estimates that a complex estate and succession plan can cost as much as \$100,000 (Applegate, 1994). To most family firms this constitutes a substantial investment, which must be justified in economic terms. For example, a previous study on the relations between the characteristics of strategic

planning systems and planning effectiveness found a positive correlation between the level of resources committed to planning and planning effectiveness, suggesting that planning resources may be viewed as investments with a delayed payback (Ramanujam and Venkatraman, 1987).

### Preparation of the Successor

A critical part of the succession process concerns the grooming of the successor (Fiegener et. al., 1996). As stated earlier, experience and grooming can decrease the likelihood of failure when one generation succeeds the next. Yet, research seems to show that very few successors are explicitly identified and fewer are prepared in advance to assume the founder's mantle. A majority of the literature in this area appears to focus on two things: competence and legitimacy. Competence refers to operational know-how, while legitimacy deals with relational skills. The study by Barach et al. (1988) indicates that 90% of executives interviewed advocate a succession strategy in which a newcomer earns credibility by gaining the necessary experience to do the job better than anyone else. There are two ways for the successor to earn legitimacy. One is to start from the bottom of the company and accumulate actual experience by working up the corporate ladder (Sales, 1990). The other is to obtain substantial external experience before joining the company (Stevens, 1990). Furthermore, the substance of a successor's experience may also make a difference to his or her legitimacy. For example, Norburn and Birley (1988) found that different functional experience (output vs. throughput) in members of the top management team has implications on corporate performance. Although that study was targeted at large corporations, one could surmise similar patterns in family firms. However, despite expert opinion on the necessity of external experience, a recent empirical study by Fiegener et. al. (1996) revealed that CEOs in family firms do not consider prior experience to be an important form of preparation. Another study found the "duo" mode of top management succession the most common (Vancil, 1987). Here, two top-level executives, a chairman and a CEO, share power, with the latter eventually succeeding the former. Such a structure implies that the legitimacy of the successor is partly derived from the successor's prior position as second-in-command

It is also from the position of second-in-command that the chosen heir is more likely to be involved in strategic planning, an experience considered critical for success (Ward, 1988). The study by Fiegener et al. (1996), however, finds that unlike non family-related CEOs, family-related CEOs rate this particular task among the least important of preparations for the successor, possibly because of their preference for maintaining rigid, and personal control over the direction of the business during their tenures. The most significant finding in Fiegener, et al. (1996) is that family-related CEOs placed more emphasis on their successors' "managing relations with customers and vendors" and "managing relations with stockholders and lenders" than their non family-related counterparts. Thus, they prefer a more direct and internally oriented approach by their successors in preparing for the CEO role, one that emphasizes building strong personal relationships among the stakeholders.

The same study also found that non family-related CEOs were more externally oriented and emotionally detached from the succession process. Their favored forms of



task preparation consisted of those that are outsourced, such as executive development seminars and university-level coursework. The literature suggests that the formal educational qualification of the successor is not a priority to most family-related CEOs. An inter-industry study on the relationship between founder experience and firm performance (Dyke, Fischer, and Reuber, 1992) failed to find any positive correlation between the level of education and various firm performance measures.

Despite the lack of empirical support, which can be attributed to poor data or study design, there is still a strongly held belief among the community of labor economists and organizational scholars that educational and functional experience enhances on-the-job performance (Becker, 1993). Education provides the basis for building general human capital, manifested in aptitude, potential, motivation and cognitive capacity (Becker, 1993; Hambrick and Mason, 1984) while functional experience provides the basis for building specific human capital that is particularly valuable in an organizational context (Becker, 1993). Becker (1993) observed that ‘most investments in human capital – such as formal education, on-the-job training, or migration – raise observed earnings at older ages...’ (Human Capital, page 245). Experience is a fundamental condition for learning and therefore, is always expected to have a positive impact on job performance (Hambrick and Mason, 1984; Armstrong, Pecotich and Mills, 1993). This implies that new CEOs who are groomed for the job would be more likely to succeed than those who have not been groomed.

### The Transition Process

Succession can be achieved in two ways: transfer of ownership and transfer of managerial responsibility. In this study, we assume that family business owners would be unlikely to relinquish both ownership and managerial responsibility at the same time. On the contrary, the succession process usually begins with a partial transfer of managerial responsibility with succession actually occurring when the other assumes the role of Chief Executive Officer. Thus, succession is seen both as a process as well as an event. This feature is unique to our study, and we hope to show that by modeling succession in this manner, we are able to capture a richer set of relationships and causal effects on performance. An indicator of a successful transition is thus the *timely* hand over of managerial responsibilities, including the final assumption of the CEO position (Rachlin, 1985; Magrath, 1988).

Although the transfer of ownership is not a criterion for succession, it has been associated with success. To ensure a smooth transition, a founder can strengthen the share-holding position of the successor, which suggests that the treatment of the heirs should be fair rather than equal. This means that the share equity should only be gifted or sold to those responsible for running the firm (Davis, 1992; Magrath, 1988). Assets outside of the business, such as real estate, should go to inactive heirs. Along this line of reasoning, the portion of ownership transferred from the founder to the successor can be used as an indicator of the effectiveness and smoothness of transition. Even if ownership is successfully transferred, tension can still exist if one or more contenders for the CEO position remain on the management team. Tension is a sign that the successor has not secured full legitimacy in the family firm, and firm performance in the future is likely to

be negatively affected by such rivalry. Ownership that is not transferred during succession may indicate reluctance by the owner to let go. Such reluctance may result from a sense of insecurity, so that if a post-succession financial program for the owner is in existence, it may attenuate the owner's lack of confidence in his or her successor.

### Succession and Business Strategy

There has been a good history of research on the impact of CEO succession on firm strategy (Smith and White, 1987; Hambrick and Mason, 1984). The extant research has found that succession is often accompanied by significant strategic change (Carroll, 1984; Tushman, Newman and Romanelli, 1986; Wiersema and Bantel, 1993). Strategic refocusing can result from a succession event is triggered by poor firm performance, which can lead to an improvement in the deployment of corporate resources (Chaganti and Sambarya 1987; Helmich, 1974). There has been little research on the connection between successful strategy and succession planning, in part because the interactions can be complex. Using a systems approach to viewing the family firm (Bowman, 1988), it is not unreasonable to assume that succession planning will also include explicit questions on the disposition of assets and the eventual deployment of corporate resources to deal with estate planning issues. Thus, the decision to keep the firm in the family, sell it, or close it down will have an impact on the strategies the firm takes to position itself for its future role. Therefore, it is conceivable that a firm's strategic stance although not necessarily a result or cause of its succession plan, would have a significant interaction with the succession process and this will in turn impact firm effectiveness.

### Performance and Effectiveness

Studies on the impact of succession on firm performance have been equivocal. Theoretically, there are three positions that one can take on this issue. Succession can lead to better performance because the rational-adaptive approach argues that poor performance often induces succession. The institutional approach argues that succession is disruptive and therefore can lead to poor performance. Scapegoating theory posits no impact on performance because succession is merely a way for boards to pacify political forces demanding a ritual sacrifice for poor firm performance. Thus, the root of poor performance is not defined and therefore there is no a priori reason why succession will lead to better performance. Empirical research has been equivocal (Grusky, 1963; Brown 1982; Pfeffer and Davis-Blake, 1986). Within the family business literature, it is still unclear whether succession leads to better performance, in part because such longitudinal data is difficult to obtain.

For our purpose, a family firm's primary objectives include both business and family. Typical measures of business success are related to financial and growth outcomes. We also know that in the U.S. alone, more than 420,000 businesses have failed in the ten years ending 1996, clearly implying that survival is just as important as profitability and market share (Goldberg, 1996). A firm survives by accumulating both capital resources and external and internal legitimacy (Pfeffer and Salancik, 1978). Thus, unless the business owner considers both business objectives and family goals together, the firm will not attain the support it needs to function internally. Similarly, because

outside stakeholders recognize the family firm as a combination of economic and family subsystems, any instability in the family will send negative signals, leading to uncertainty and cause the withdrawal of external stakeholder support for the business. Thus, we argue that effectiveness, which includes financial both financial and family goals, rather than pure financial performance is a better outcome measure of succession planning. First, it is unlikely that planning per se will lead to better economic performance; other firm and industry related factors may be just as important. More importantly, planning is a necessary, though perhaps not sufficient condition, for good economic performance. Second, effectiveness includes the notion of support for the planning process and the plan. A resource dependence perspective would argue for legitimacy and support as a precondition for the adoption of any decision that will impact the eventual allocation of resources to stakeholders. Thus, family support for the plan will determine the likelihood of its implementation and thus eventual success.

It is technically difficult to measure the non-economic dimensions of family-firm performance. One has to resort to questionnaire methods and self-reported measures of satisfaction. Previous empirical research on this subject is virtually non-existing. Some writers (e.g. Friedman, 1986) have suggested several dimensions that define effective succession, including enhanced company reputation, reduced turnover, and increased financial performance. These criteria, however, are all business-related and do not reflect the effectiveness of the firm in achieving the objectives of the family.

### ***The Theoretical Model***

The preceding literature review suggests that to understand succession, the family business must be viewed as a set of subsystems. Indeed, Bowman (1988) describes a family business as consisting of two subsystems--a task system, which is the business, and a sentient system, the family. Thus, although they may not be equal in priority for the owner, there will always be two sets of goals for a family business even though they (a largely economic one for the business and a relational one for the family) may be in conflict. For example, a study by Riordan and Riordan (1993) discovered the widespread use of business resources to achieve family goals in small family firms. The implication of this is that the financial performance of a family firm may not be reflective of the firm's effectiveness in achieving its overall objectives. For our purposes, we view the firm as having three subsystems: the family, economic and social subsystems. Using the resource dependence approach we discussed in the previous section, we posit the existence of a social subsystem as this represents the interface between the firm and its social environment. It is from the social environment that legitimacy and status is conferred to the business and the family subsystems.

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Insert Figure 1 about here

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In Figure 1, the family subsystem interacts with the economic one via the exchange of resources. The family is often the first source of financial and human

resources to the firm. In turn, the residual from production returns to the family, where relationships are held together by the fair disbursement of economic wealth, so that it can achieve its goals of security and stability. The economic or business subsystem interacts with the social one in that the business exists in contemplation of the law, community expectations and legitimacy. A resource dependence perspective regards the social legitimacy of a business a key condition for its long-term survival. For example, the withdrawing of legitimacy for tobacco companies has put into question their long-term prospects, causing many to diversify their businesses into less controversial industries. The family subsystem interacts with the social subsystem because both systems are based on relational, rather than transactional, exchange. These relational exchanges are long lasting, pervasive and self-reinforcing. The family derives social legitimacy, recognition and status from the social subsystem while the social subsystem often derives economic resources from the family. The incidence of family connected charitable organizations (e.g., the Gates Foundation, the Ford Foundation, the Rockefellers Foundation, the Carnegie Foundation, etc.) testify to the tight linkages between the family and the community. A systems view of the family firm implies that business decisions are often intertwined with family and social conditions so that business strategy cannot be understood in full without considering parallel effects on the other two subsystems. This also implies that performance is difficult to measure and in trying to measure it, we have to allow for multidimensionality of purpose and outcome. Finally, a systems approach also suggests that interaction effects have to be taken seriously, as these will have a significant impact on outcome.

As discussed before, very few studies have empirically linked succession planning to performance. In a recent study, Morris (1997) developed a causal model of post-succession performance as a function of characteristics of the transition, and the transition, in turn, as a function of three groups of variables--preparation of heirs, nature of family and business relationships, and planning and control activities. In this study, we posit a theoretical model of the family firm that leads to a research model (Figure 2), which says that succession planning and its interaction with strategy and successor preparedness will correlate with effectiveness.

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Insert Figure 2 about here

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Note that while this model is a step forward in understanding succession performance, in that it tries to model the antecedents to effectiveness, it has the same shortcomings as previous endeavors (Venkatraman, 1989). These have been discussed by Sharma, et al. (1997), who point out that “No one appears to have investigated how much of the subsequent performance of a family business is determined by the succession process and how much by the successor. In family business research, this issue seems to be too important to be left as an assumption.”

In our research model three determinants of effectiveness are posited. One contains dimensions that describe the preparedness of the successor. The other contains

dimensions that describe the preparedness or comprehensiveness of the succession plan. The third describes the economic, family and social goals contemplated by the business owner. Preparedness of the succession plan is the independent variable while successor preparedness and goals are the partial moderators. We posit a separate and independent effect by the latter constructs on effectiveness, in addition to their moderating effects. Thus, effectiveness of the succession is directly and indirectly determined by succession planning, the preparedness of the successor and goals.

The model, therefore, consists of five hypotheses represented by the arrows in Figure 2. In simple terms, a well-planned succession process will lead to a smooth transfer of managerial responsibilities from one generation to the next, producing superior firm performance and effectiveness (defined as satisfaction by stakeholders of the succession process). In addition to this, the preparedness of the successor, quite apart from the plan, will have an interaction effect with the comprehensiveness of the plan to produce superior performance and effectiveness. As discussed earlier, we also expect the firm's goals to have a moderating impact on succession planning such that it can either enhance performance or degrade it. Thus, good post-succession firm performance is not only a result of a smooth transition, but also a function of preparedness of the successor.

## ***Methodology***

### **Variable definitions**

For this study, two control variables were used. First was firm size, which was measured as the natural log of the number of employees. Size has been found to be a significant correlate with many dimensions of an organization's structure and strategy. Next was country of origin. Here, we expect that tradition and national culture would play an important role in how founders viewed the role of the family, business and social relationships between the subsystems.

Next the preparedness or comprehensiveness of the succession plan was measured as a 5-point Likert scale constructed from the following factors: whether a successor has already been chosen, a formal written plan in place, a board of advisors was involved in the process, the business owner has thought about the educational and training qualifications of his successor. Thus, the more formal and comprehensively thought through the succession plan (with an identified successor and written plan) the more comprehensive it is.

From the literature review, we measured preparedness of the successor as his or her experience (in years) in the family firm and other firms, and the level of formal business and technical education. Finally, to measure family firm goals, a multiple item scale derived from the literature and initial field interviews with a small number of family business owners was constructed, which tapped into both business as well as family and social goals (Table 1). These items were factors analyzed and orthogonally rotated to produce four constructs namely family and social goals, low cost strategy and differentiation strategy goals. As can be seen in Table 1, there appears to be face validity of the constructs. The confirmatory factor analysis and the resulting reliability analysis

also indicated construct validity as the alphas were within the acceptable range for further data analysis (Nunnally, 1978).

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Insert Table 1 about here

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The effectiveness of the succession plan was measured on a 5-item Likert scale of stakeholders' (family members, suppliers, investors, and the board of directors or advisors) satisfaction with the succession plan. Firm performance was measured in two ways, growth in sales and a self-reported measure of relative performance on 5 dimensions (quality, profitability, reputation, innovation, and market share). Although the relative measure of performance was self-reported, because it was anchored to specific ranges (top 10%, top 20%, mean, bottom 20%, bottom 10%), the problem of percept-percept bias, the most severe kind of common method variance problem, was minimized. In addition, comparisons of respondents' reports of sales and employee size against published sources of information from the original database did not indicate widespread bias, which led to greater confidence in the self-reported scores. A Kolmogorov-Smirnov (K-S) 2-sample test was used to assess the hypothesis:  $H_0: X_{\text{respondent}} = X_{\text{non-respondent}}$ .

### Data

Part of the opportunity inherent in this type of research question is the broad appeal to owners and managers of SMEs. This appeal is cross border as the same types of problems faced by family firms everywhere are similar. In order to make the study generalizable, and to control for cultural and national specific factors that may systematically impact family business succession processes, a decision was taken to obtain the sample from a cross-national population of family firms with the appropriate country-of-origin controls in place.

For this study, data was collected through mailed questionnaires targeting family firms in two countries (Hong Kong SAR, and Canada). Family firms were defined as independent companies with at least 50% of ownership controlled by one family, and at least 50% of the senior management team from one family. These firms were identified through government databases on the basis of one of the following two criteria: (1) the name of the company suggests that the firm is family-controlled (e.g. Brosz and Associates), and (2) two or more members of the senior management team have the same family name. Additionally, random checks were made by telephone to confirm validity of the addresses and names on the list. Furthermore, companies with fewer than fifteen employees were excluded since past research has shown that this group tends to be younger and therefore systematically different in the way they were managed and in the problems they faced. The mailing sample size was targeted at 500 firms per country. In total, about 100 responses per country were received, which translated to a 20% response rate. Further t-tests of the means were conducted to ensure that the responses between the two countries were comparable.

## The Questionnaire

The questionnaire, first designed in English and then translated to Mandarin was structured for a comprehensive, cross-border study. Thus, the usual precautions related to cultural specific and national specific response biases are taken into consideration. In addition, care was taken to ensure that scale of operation was comparable for firms across national boundaries, which meant an explicit consideration for currency exchange rates. The questionnaire was pre-tested with a small Canadian-based sample. An initial scan of the data showed that the responses were mostly complete, indicating that the questionnaire was not confusing. The final questionnaire was first administered in the Metro Toronto area in the Province of Ontario, Canada and subsequently administered in Hong Kong, Special Administrative Region of China.

The survey questions are grouped into five categories. The first group consists of questions concerning the succession planning process. Respondents are asked whether there was a succession plan, it was a written plan, an estate plan was included, the plan was known to all parties, there was a shareholder's agreement, and there was a financial security plan in force for the founder. Questions are also asked about the length of the planning process and the people involved, including consultants, attorneys and accountants. Who made the decision is also asked, with emphases on the number of decision-makers and the number of types of decision makers (family members, senior employees, consultants, lawyers, accountings).

The second group deals with successor preparation. Questions are asked about the respondent's educational background, and number of years of internal and external experience. Respondents are also asked to respond to how heavily they were involved in each of a set of activities before succession, such as running a division or functional area, and dealing with vendors or creditors. The third group of questions probes the timeliness, completeness, and smoothness of the planning process and comprehensiveness of the plan. Respondents are asked about the percentage of ownership transferred to them from the founder at the time when they formally took over the title of CEO. Questions are also asked about the perceived adherence to a succession timetable, perceived level of support from family members and other stakeholders, perceived control over managerial responsibilities, and perceived roles of the founder and contenders for the CEO position.

The fourth group has to do with post-succession performance of the firm, using both objective and subjective questions. Objective criteria include average sales and profit in the last three years, and average growth rates of sales, profit, and employment in the last three years. Industry and temporal variables, however, influence these indicators. Self-reported questions are included to reflect competitors' relative performances. The last group of questions is demographic and deals with company and respondent profile. The criteria of the sample will be enforced through questions regarding the company structure, composition of ownership, and number of employees. The questionnaire was designed to be completed by the owner/CEO of the firm and care was taken to ensure that this was complied with. A cover letter discusses the purpose of the survey and provides

an assurance of confidentiality. As an incentive, respondents are promised a summary of the results provided they fill in and send back an enclosed postcard.

The research model was tested using a combination of correlation analysis and hierarchical regression. In the latter, control variables were entered prior to the independent variables to ascertain the contribution to variance explained by the independent variables. Finally, the interaction terms were included to determine the variance explained contributed. The final regression equation was then examined for significant relationships between the predictor and dependent variables in order to verify the relationships posited in the research model as laid out in Figure 2.

## **Results**

### Sample characteristics

Since this is the first ever cross-border survey conducted on this research question, it is interesting to understand the sample characteristics. Most of the companies that responded are from the manufacturing sector followed by service sector and then wholesale. There are more manufacturing respondents from Hong Kong than Canada, in terms of percentage to total responses. Businesses in Canada were owned for an average of 27 years as compared to those in Hong Kong, which were younger at 22 years. More than 50% of the Canadian firms reported revenues of over C\$5 million while 37% of the Hong Kong firms reported revenues in the same range (currency converted). The average tenure of the respondent as CEO was about 16 years for the Canadian sub-sample and about 14 years for the Hong Kong one. Succession has not yet occurred in about 65% of the sample, while it had occurred once before in 25%. Similarly, 68% of the firms reported that they were first generation owner-managed while 25% reported that they were second generation firms. The last statistic is in line with much of the research demonstrating that few firms survive beyond the second generation. In the Canadian sub-sample, 61% of the survey respondents were the firms' founders while in the Hong Kong sample, 72% were founders. On average about 30% of the respondents reported being a son or daughter of the founder. In all cases, the respondents were the CEOs of their companies. In terms of the retirements plans that owners had for their companies, 56% of the Canadians said they would likely pass the business to family members while only 49% of the Hong Kong owners said they would do so. Surprisingly, fully 9% of the Canadian owners said they would likely close the firm while 10% of the Hong Kong sample said they would do so.

Interestingly, more than 55% of the firms reported they had either a Board of Directors or Council of Advisors. There were on average 3 to 6 directors on each board with half of these being family members. Although the respondents were able to fully respond to questions on successor preparation (for example, most agreed that technical and management training and experience were important successors preparedness), 72% of the Canadian firms did not have written succession plans while more than 83% of the Hong Kong firms reported the same. Interestingly, even without a written plan, more than 96% of the Canadian firms had already made their succession plans public to the family, for an average of 3 years, whereas only 72% of the Hong Kong firms did so. The



Canadian founders formulated 48% of these plans while the Hong Kong ones formulated 55%. Additionally, about 23% of the plans in both sub-samples were formulated as a result of family meetings. In 31% of the Canadian cases, a successor had already been chosen whereas only in 19% of the Hong Kong cases was this so. For those who planned to keep the firm in the family, on average, about 80% of the successors would be a son or daughter while 18% would be a grandchild.

#### Corporate governance and succession planning

With regard to corporate governance issues and succession planning, Table 2 reports the Pearson correlations between aspects of the governance structure of the firm and its succession planning practices. While this is not central to the purpose of this study, it is instructive to understand how governance and succession planning are linked in order to understand the results of the hypotheses test. In particular, we note that firms reporting the existence of a board of directors also reported less family meetings (-0.33,  $p < .000$ ) suggesting that the board is a useful mechanism to separate the business subsystem from the family subsystem of the firm. The advantages are obvious. A separation of both systems ensures that decisions taken in either system are not compromised by considerations for the other. Thus, business decisions can be taken to maximize economic outcome, which provides the necessary resources for the family system to optimize its outcome as well. The data reports that the number of family meetings also produced more acceptable succession plans (0.24,  $p < .001$ ). Thus, the intersection between family and business is still best managed within the family, rather than in the boardroom. This suggests that a succession plan reflects the decisions impacting the family-business interface. It is also clear from the data that smaller companies were less likely to have a formal board of directors or advisors (-0.28,  $p < .000$ ), in part because the cost of doing so (paperwork, fees and other compensation, etc.) can be high relative to the size of the firm. Table 2 also reports significant relationships between country-of-origin and various aspects of succession planning and corporate governance. For example, Canadians were more prone to estate planning (0.35,  $p < .000$ ) and shareholder agreements (0.19,  $p < .01$ ), yet reported less succession preparedness (-0.41,  $p < .000$ ).

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Insert Table 2 about here

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There was a high correlation between estate planning and the existence of shareholder agreements (0.45,  $p < .000$ ) but a negative one to preparedness (-0.35,  $p < .000$ ). This seems to suggest that succession preparedness goes much further than simple estate planning but that owners often confused the two. Heretofore, much of the business succession planning literature has focused on estate planning and shareholder agreements. This result suggests that we have to go beyond simple formulations of succession planning in family businesses as wealth transfer to include leadership transition as in the training of the successor. It is also noteworthy that larger firms were more prepared for the succession event (0.30,  $p < .000$ ), which demonstrates the amount of resources, in CEO attention and time, that are required for a well formulated plan. Also,

the older the firm, the more likely it will eschew estate planning (-0.32,  $p < .000$ ) and shareholder agreements (-0.17,  $p < .05$ ) in favor of more comprehensive succession planning (0.22,  $p < .01$ ). As expected, succession preparedness was positively correlated with succession effectiveness (0.35,  $p < .000$ ).

### Main correlations

Table 3 reports the Pearson correlations for the variables in the study. Most notable are the correlations between succession effectiveness and the interaction between succession preparedness and family goals (-0.17,  $p < .05$ ), and preparedness and successor experience (0.33,  $p < .000$ ). Also, the correlations between relative performance and business strategies (low cost: 0.15,  $p < .05$ ; differentiation: 0.36,  $p < .000$ ), social goals (0.26,  $p < .000$ ), succession preparedness (-0.29,  $p < .000$ ), and the interactions between preparedness and differentiation strategy (0.33,  $p < .000$ ), family goals (0.17,  $p < .05$ ), social goals (0.26,  $p < .000$ ) and experience (-0.17,  $p < .05$ ) confirms an earlier discussion on the complexity in the succession planning and effectiveness equation.

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Insert Table 3 about here

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Table 3 also reports a negative correlation between succession effectiveness, which was previously defined as satisfaction of the firm's stakeholders with the succession plan and planning process, and revenue growth (-0.24,  $p < .001$ ), although there was a strong positive correlation between relative performance and revenue growth (0.33,  $p < .000$ ). This is an interesting result because it suggests a fundamental incompatibility between economic and family goals. Thus, succession plans that had the support of the firm's stakeholders did not necessarily translate into better short-term performance in the marketplace. It is this fundamental conflict that continues to dog family business owners, perhaps accounting for the high rate of failure during generational transitions.

### Tests of the theoretical model

Table 4 reports the hierarchical regression analyses for the independent variables on each of the dependent variables, relative performance, succession effectiveness and revenue growth. First, notice that firm size reported a significant relationship to the dependent variables in all three models. There were also significant relationships between country of origin and relative performance and revenue growth but not with succession effectiveness. Part of the relationship may be attributed to industry specific influences in the countries of origin. In all, the control variables explained between .016 and .177 of the total variance. The addition of the independent variables increased this to between .096 and .296. In two of the three models, the predictor variables registered significant changes in variance explained (.119 for relative performance and .104 for succession effectiveness). In all three models, succession preparedness accounted for much of the additional variance explained while goals accounted for the additional variance explained in the relative performance model. Finally, the addition of the interaction terms did not seem to increase the variance explained significantly. Additional variance explained varied from .00 to .022. In total, all three models reported

total variance explained of between .09 and .354. At first glance it appears that succession planning, business and family goals all had statistically significant relationships with effectiveness and performance. Table 5 reports that all three models were statistically significant at the .000 level.

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Insert Table 4 about here

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Turning to Table 5, we examine these relationships more carefully to verify the theoretical model. First, notice that there were generally little significant relationships between the interaction terms and the dependent variables. Only with respect to succession effectiveness did a significant positive relationship occur between succession preparedness and successor experience ( $t=2.44$ ,  $p<.015$ ). Thus, in firms that reported a high level of succession preparedness, the addition of successor experience (preparedness) disproportionately increases the degree of stakeholders' satisfaction with the succession plan. This is a noteworthy finding because it seems to suggest that stakeholders to a succession plan are very concerned about the stability that an experience successor can bring and the increased likelihood that experience will ensure the full and complete implementation of the succession plan.

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Insert Table 5 about here

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Table 5 reports that firms pursuing **either** a low cost ( $t=2.11$ ,  $p<.05$ ) or differentiation ( $t=2.72$ ,  $p<.01$ ) strategy (the factors were orthogonally rotated) were also more likely to report higher levels of relative performance. This is simply congruent with traditional strategic management positioning models a la Porter (1980). What is more interesting is the lack of significant relationships between family and social goals with effectiveness or performance. Again, this seems to suggest that the explicit pursuit of non-economic goals hinders rather than enhances the fulfillment of family objectives. Instead, firms that keep their focus on pursuing a pure business strategy are able to generate enough resources to allow family and social goals to be met outside of the context of the business subsystem.

Table 5 also reports a positive and significant relationship between succession preparedness and effectiveness ( $t=1.82$ ,  $p<.10$ ). Thus, explicit considerations for a formal plan and the selection of a successor contributed greatly to reducing uncertainty and thus increased stakeholders' satisfaction. In two of the three models, successor preparedness, defined as a successor having worked in the family firm or similar companies for a period of time and the level of his formal education was positively correlated with relative performance ( $t=1.71$ ,  $p<.10$ ) and revenue growth ( $t=1.95$ ,  $p<.05$ ). Thus, there is a clear economic impact on grooming a successor such that he or she takes an active role in the firm before taking over the mantle of leadership.

Finally, as mentioned earlier, all three models were statistically significant, reporting variance explained of between .09 ( $F=2.35$ ) to .303 ( $F=6.90$ ). In total there were 204 valid cases in the regression models. Standard checks for outliers, heteroscedasticity, and normality did not reveal any problems with the regression models.

## ***Discussion***

Although the regression models did not report many statistically significant relationships, those variables that were significant accounted for a high degree of variance explained, suggesting that we are on the right track. Taken together, the research model (Figure 2) received some support. In particular, we note that the variable we introduced to the literature, comprehensive succession planning (or in the short form, succession preparedness) was significantly related to effectiveness, which we earlier argued from a resource dependence perspective is critical to long term survival. The significance of the interaction between successor preparedness (experience) and succession preparedness is also important because it does suggest that the impact of succession planning on effectiveness is multidimensional. It may even be non-linear, although we did not test for second order effects in this model because we did not present an explicit theoretical rationale for doing so. However, it is conceivable that some experience, together with succession planning can lead to superior effectiveness because a smoother transition will likely reduce wasted resources. On the other hand, long tenure in the family business, coupled with a formalized succession plan may result in the successor simply being crowned, which while guarantees the most stable transition outcome, can lead to myopia in strategic decision making and over-commitment to a certain direction. In such a case, the 'shadow of the founder' is not easily shaken and while that can provide a degree of continuity, it can also militate against significant and perhaps critical change.

Clearly, more work needs to be done in this area. Even though we believe that we captured all the relevant indicators of the succession preparedness (or planning comprehensiveness) construct, it would be useful to take these results back into the field to see how business owners react to it. Some comments we received on the survey forms seem to indicate that a degree of dynamism may be missing in our constructs. In particular, a number of respondents suggested that the strategic and business goals of the firm change over time as both the family and business grow and mature in parallel to each other. This parallel dynamism was not captured in our model and therefore deserves further thinking. It may be that family goals and strategic goals have an interactive effect with each other, which in turn has a third order interactive effect with succession planning to impact performance and effectiveness. This type of recursive causal model is best tested using a causal modeling approach such as LISREL. Unfortunately, we do not have a large enough sample with which to do this since each construct consists of a number of variable indicators, each requiring at least 10 cases for adequate statistical power. Thus, this will have to wait until the sample size can be expanded and more data collected.

## **Conclusions**

This study has attempted to examine a specific aspect of corporate governance in family businesses: the succession planning process. Using a theoretical model, partially based on resource dependence theory that asserts legitimacy accorded by the firm's stakeholders is critical to organizational survival, the study sought to empirically test an interactive relationship between goals, successor experience and planning comprehensiveness on performance. In order to render the results generalizable, a decision was taken to extend the study across national boundaries. From the standpoint of the empirical test, the results provided some, though not unequivocal support for the theoretical model. Certainly the results did not contradict the model but neither did it provide full support. The most significant support it provided was to affirm the relationship between succession planning and firm effectiveness, which deserves further study. In particular, it would be useful to investigate second and third order interactions between succession planning, strategy and successor experience.

The study did not look at the role played by the board of directors or advisors beyond the simple relationships between board presence on the existence of formal succession planning. The results did raise a notion that formalizing corporate governance in the family firm, but having a board effectively separates the business and family subsystems of the firm, which can lead to better business and family decisions. However, more can be done in this area. Specifically, the study can be extended to look at the impact of board size, board composition and board relationship with the founder on the succession planning process, effectiveness and business strategy.

Finally, this study calls for the development of a recursive causal model. Till now, much of the research, including this study, has been correlational and although a theoretical case can be made, and has been made in this study, for a causal direction in the correlations, it is important to explicitly test for this. Two methods are possible. The first is the standard longitudinal panel study but the second employs respondent recall data. Here, sample selection is critical because only respondents that have just assumed leadership of the family firm can participate. However, because the event is recent, recall accuracy is not compromised. Thus, although the sample size is reduced using this method, the data will have less noise and therefore the statistical power of the test will be preserved.

## **References**

- Applegate, Jane, 1994 "Keep your firm in the family." *Money: Money Guide Supplement*, 88-90.
- Armstrong, Robert W., Anthony Pecotich and Brad Mills, 1993 "Does the Sales Manager Make a Difference? The Impact of Sales Management Succession Upon Departmental Performance" *Journal of Personal Selling & Sales Management*, Vol.XIII n4, 15-24
- Aronoff, Craig E. and John L. Ward, 1992 "Facing the Fears of Retirement" *Nation's Business*, February, Vol.80 n2, 38-40.
- Atchley, R. C., 1989 "A continuity Theory of Normal Aging" *The Gerontologist*, Vol.29 n2, 183-190
- Barach, Jeffrey A., J. Gantisky, J.A. Carson and B. A. Doochin, 1988 "Entry of the Next Generation: Strategic Challenge for Family Business." *Journal of Small Business Management*, Vol.26 n2, 49-56.
- Becker, Gary S., 1993 *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education/ 3e*, University of Chicago Press: Chicago, Ill
- Berenbein, R. E., 1984 "From Owner to Professional Management: Problems in Transition" *Conference Board Report 851*, The Conference Board: New York, NY
- Bommer, William H., and Alan E. Ellstrand, 1996 "CEO Successor Choice, It's Antecedents and Influence on Subsequent Firm Performance" *Group and Organization Management*, Vol.21 n1, 105-123
- Bowman, Upton Nancy, 1988 "Family Business Succession" *Baylor Business Review*, v6 n2, 26-30.
- Brown, M. C., 1982 "Administrative Succession and Organizational Performance: The Succession Effect" *Administrative Science Quarterly*, Vol.27, 1-16
- Carroll, G., 1984 "Dynamics of Publisher Succession in Newspaper Organizations" *Administrative Science Quarterly*, Vol.29, 303-329
- Chaganti, R., and R. Sambharya, 1987 "Strategic Orientation and Characteristics of Upper Management" *Strategic Management Journal*, Vol.8, 393-401
- Churchill, Neil C. and Kenneth J. Hatten, 1987 "Non-Market-Based Transfers of Wealth and Power: A Research Framework for Family Businesses" *American Journal of Small Business*, Vol.11 n3, 51-64.

- Churchill, Neil C. and V. L. Lewis, 1983 "The Five Stages of Small Business Growth" *Harvard Business Review*, Vol.61n3, 30-51
- Davis, Eileen, 1992 "Long Live the Business" *Small Business Reports*, Vol.17n11, 30-40.
- Duffy, P. B., and H. H. Stevenson, 1984 "Entrepreneurship and Self-Employment: Understanding the Distinctions" in J. A. Hornaday, F. Tarpley Jr., J. A. Timmons and K. A. Vesper (eds), *Frontiers of Entrepreneurship Research*, Babson College: Wellesley, MA, 461-477
- Dumas, Colette, 1992 "Integrating the Daughter into Family Business Management" *Entrepreneurship: Theory and Practice*, Vol.16n3, 41-55
- Dyke, Lorraine S., Eileen M. Fischer, and A. Rebecca Reuber, 1992 "An Inter-Industry Examination of the Impact of Owner Experience on Firm Performance" *Journal of Small Business Management*, Vol.30n4, 72-87.
- Dyer, W. Gibb Jr., 1986 *Cultural Change in Family Firms: Anticipating and Managing Business and Family Transitions*, Jossey-Bass: San Francisco, CA
- Dyer W. Gibb Jr., and Wendy Handler, 1994 "Entrepreneurship and Family Business: Exploring the Connections" *Entrepreneurship: Theory and Practice*, Vol.19n1, 71-83
- Fiegener, Mark K., Bonnie M. Brown, Russ A. Prince, and Karen M. File, 1996 "Passing on Strategic Vision: Favored Modes of Successor Preparation by CEOs of Family and Nonfamily Firms" *Journal of Small Business Management*, Vol.34n3, 15-26.
- Fox, Mark, V. Nilakant, and R. T. Hamilton, 1996 "Managing succession in family owned businesses" *International Small Business Journal*, Vol.15n1, 15-25.
- Friedman, S., 1986 "Succession systems in large corporations: characteristics and correlates of performance." *Human Resource Management*, Vol.25, 191-213.
- Fry, Louis W. and Deborah A. Smith, 1987 "Congruence, Contingency, and Theory Building" *Academy of Management Review*, Vol.12n1, 117-132.
- Goldberg, Steven D., 1996 "Effective Successor in Family-Owned Business: Significant Elements" *Family Business Review*, Vol.9n2, 185-197.
- Grusky, O., 1963 "Managerial Succession and Organizational Effectiveness" *American Journal of Sociology*, Vol.69, 21-31
- Hambrick, D. C., and P. A. Mason, 1984 "Upper Echelons: The Organization as a Reflection of its Top Managers" *Academy of Management Review*, Vol.9, 193-206

- Handler, Wendy C., 1990 "Succession in Family Firms: A Mutual Role Adjustment Between Entrepreneur and Next-Generation Family Members" *Entrepreneurship: Theory and Practice*, Vol.15n1, 37-51.
- Handler, Wendy C., 1991 "Key Interpersonal Relationships of Next-Generation Family Members in Family Firms" *Journal of Small Business Management*, Vol.29n3, 21-32
- Handler, Wendy C., 1994 "Succession in Family Business: A Review of the Research" *Family Business Review*, Vol.VIIIn2, 133-157.
- Harris, Dawn, Jon I. Martinez, and John L. Ward, 1994 "Is Strategy Different for the Family-Owned Business?" *Family Business Review*, Vol.VIIIn2, 159-174.
- Haveman, Heather A., 1993 "Ghosts of Managers Past: Managerial Succession and Organizational Mortality" *Academy of Management Journal*, Vol.36n4, 864-881
- Helmich, D. L., 1974 "Organizational Growth and Succession Patterns" *Academy of Management Journal*, Vol.17, 771-775
- Jaffe, Dennis T., 1993 "Succession by consensus" *Small Business Reports*, Vol.18n12, 42-45.
- Jensen, Michael C. and William H. Meckling, 1976 "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure" *Journal of Financial Economics*, Vol.3, 305-360
- Kets de Vries, M. F. R., 1985 "The Dark Side of Entrepreneurship" *Harvard Business Review*, Vol.63n6, 160-167
- Kirby, David A., and Thomas F. Lee, 1996 "Succession Management in Family Firms in the North East of England" *Family Business Review*, Vol.9n1, 75-85.
- Lansberg, I. S., E. Perrow, and S. Rogalsky, 1988 "Family Business as an Emerging Field" *Family Business Review*, Vol.1, 1-8
- Leighton, David S. R. and Donald H. Thain, 1997 *Making Boards Work: What Directors Must Do To Make Canadian Boards Effective*, McGraw-Hill Ryerson: Toronto, Canada
- Life and Health Insurance Sales*, 1995 "Family business owners", Vol.138n3, 42-44.
- Magrath, Allan J., 1988 "The Thorny Management Issues in Family-Owned Businesses" *Business Quarterly*, Vol.52n4, 72-76.
- Miller, Danny, 1993 "Some Organizational Consequences of CEO Succession" *Academy of Management Journal*, Vol.36n3, 644-659



- Morris, Michael H., 1997 "Correlates of Success in Family Business Transitions" *Journal of Business Venturing*, Vol.12n5, 385-401.
- Norburn, David and Sue Birley, 1988 "The Top Management Team and Corporate Performance" *Strategic Management Journal*, Vol.9, 225-237.
- Nunnally, J.C., 1978 *Psychometric Theory*, McGraw Hill: New York, NY
- Osborne, Richard L., 1991 "Second-Generation Entrepreneurs: Passing the Baton in the Privately Held Company" *Management Decision*, Vol.29n1, 42-46.
- Pfeffer, Jeffrey and A. Davis-Blake, 1986 "Administrative Succession and Organizational Performance: How Administrative Experience Moderates the Succession Effect, *Academy of Management Journal*, Vol.29, 72-83
- Pfeffer, Jeffrey and Gerald R. Salancik, 1978 *The external control of organizations*, Harper & Row: New York, NY
- Rachlin, Norman S., 1985 "Agency Perpetuation Takes Careful Planning" *National Underwriter Property/Casualty*, Vol.89n33, 28-29.
- Ramanujam, Vasudevan and N. Venkatraman, 1987 "Planning System Characteristics and Planning Effectiveness" *Strategic Management Journal*, Vol.8, 453-468.
- Rhine, D. S., 1992 "The need for succession planning in family businesses" *Small Business Controller*, Spring, 6-9.
- Riordan, Diane A. and Michael P. Riordan, 1993 "Field Theory: An Alternative to Systems Theories in Understanding the Small Family Business" *Journal of Small Business Management*, Vol.31n2, 66-78.
- Sales, Michael J., 1990 "Succession Planning in the Family Business" *Small Business Reports*, Vol.15n2, 31-40.
- Schein, Edgar H., 1985 *Organizational Culture and Leadership*, Jossey-Bass: San Francisco, CA
- Schulman, Michael G., 1991 "Successful Succession Planning" *CA Magazine*, July, 43-45.
- Sharma, Pramodita, James F. Chrisman, and Tess H. Chua, 1997 "Strategic Management of the Family Business: Past Research and Future Challenges" *Family Business Review*, Vol.10n1, 1-35.
- Sheppard, H. L., 1976 "Work and retirement" in R. H. Binstock and E. Shanas (eds), *Handbook of Aging and the Social Sciences*, Van Nostrand: New York, NY

- Smith, M., and M. C. White, 1987 "Strategy, CEO Specialization and Succession" *Administrative Science Quarterly*, Vol.32, 263-280
- Sonnenfeld, Jeffrey, 1988 *The Hero's Farewell: What Happens when CEOs Retire*, Oxford University Press: New York, NY
- Stevens, Mark., 1990 "Putting the 'Family' in the Family Business" *Small Business Reports*, Vol.15n11, 23-26.
- The Economist*, "An Army of Ants", in Journal Staff (Eds.), A Survey of Taiwan, Vol.349n8093, 8-9
- Tushman, Michael, and E. Romanelli, 1985 "Organizational Evolution: A Metamorphosis Model of Convergence and Reorientation" in Barry M. Staw and Larry L. Cummings (Eds.), *Research in Organizational Behavior*, Vol.7, JAI Press: Greenwich, CT, 171-222
- Vancil, Richard F., 1987 "A Look at CEO Succession" *Harvard Business Review*, Vol.65n2, 107-117.
- Venkatraman, N., 1989 "The Concept of Fit in Strategy Research: Toward Verbal and Statistical Correspondence" *Academy of Management Review*, Vol.14n3, 423-444.
- Ward, J. L., 1988 "The Special Role of Strategic Planning for Family Businesses" *Family Business Review*, 105-117.
- Ward, J. L., 1987 *Keeping the Family Business Healthy*, Jossey-Bass: San Francisco, CA
- White, Michael C., Mark Smith, and Tim Barnett, 1997 "CEO Succession: Overcoming Forces of Inertia" *Human Relations*, Vol.50n7, 805-828
- Wiersema, Margarethe F., and Karen A. Bantel, 1993 "Top Management Team Turnover as an Adaptation Mechanism: The Role of the Environment" *Strategic Management Journal*, Vol.14, 485-504
- Zaudtke, David and Doug Ammerman, 1997 "Family businesses: the next generation" *Management Review*, Vol.86n2, 54-57.

Figure 1: Theoretical Model of the Family Firm

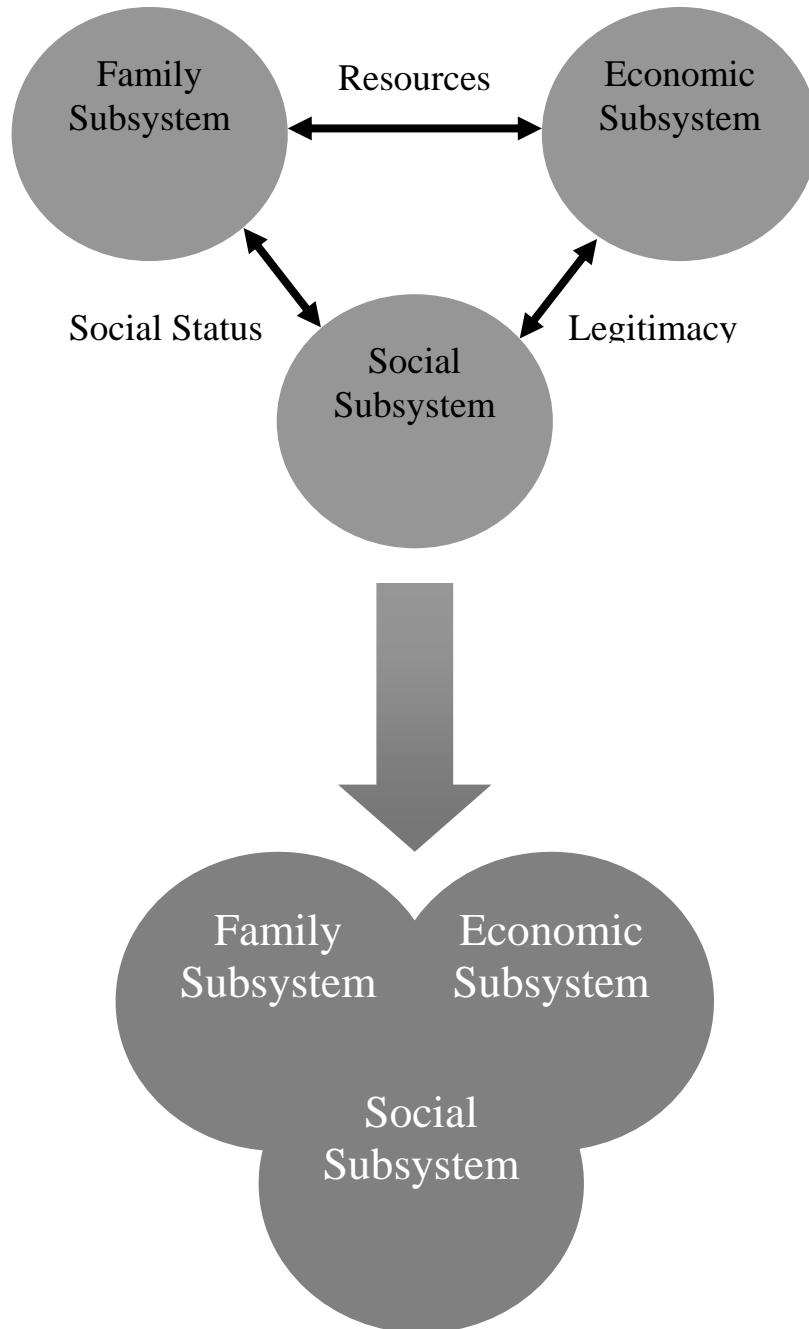
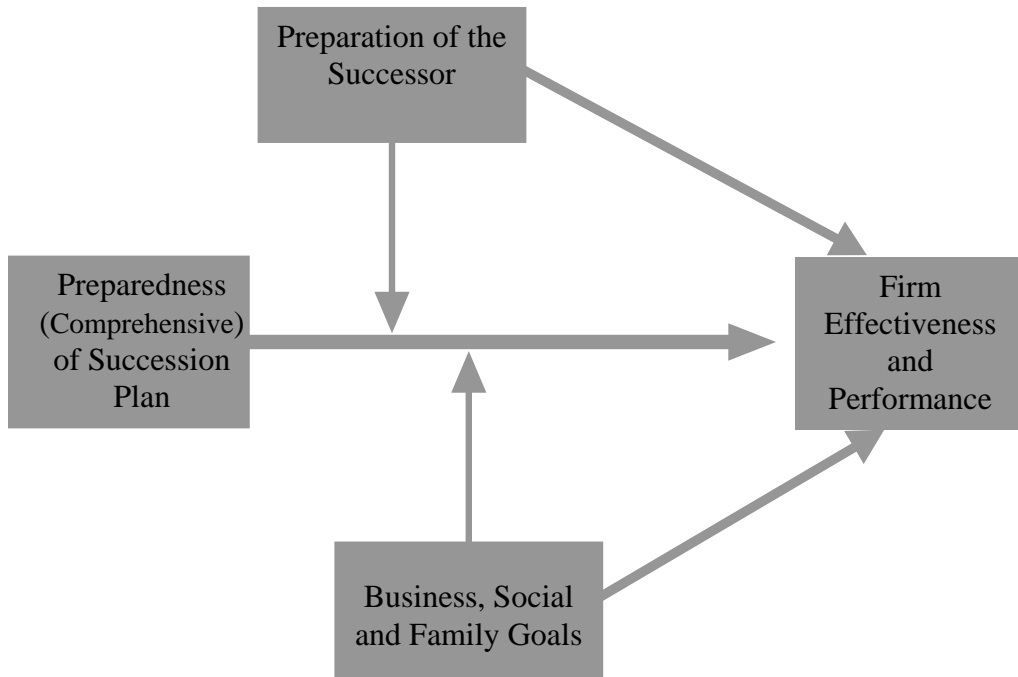


Figure 2: Research Model



**Table 1: Confirmatory Factor Analysis of Goals<sup>a</sup>**

| Goals as Drivers of Business Strategies   | Low Cost Strategy | Differentiation Strategy | Social Goals | Family Goals |
|---|-------------------|--------------------------|--------------|--------------|
| Lowest Production/Service Delivery Costs  | .804              | .117                     | .016         | .114         |
| Find Lowest Cost Supplies/Raw Materials   | .797              | -.077                    | -.061        | .064         |
| Keeping Overhead Costs As Low As Possible | .759              | .269                     | .141         | .105         |
| Maintaining Low Cost In Operations        | .660              | .235                     | .121         | .106         |
| Maintaining Good Relationships Suppliers  | .470              | .204                     | .396         | -.073        |
| Maintaining Sales Growth                  | .182              | .708                     | .134         | .282         |
| Achieve Highest Quality Customer Service  | .244              | .705                     | .219         | -.068        |
| Improving Business Profitability          | .200              | .629                     | .209         | .221         |
| Excellence In Product Designs/Features    | .278              | .588                     | .382         | -.156        |
| Differentiating Products Or Services      | -.042             | .564                     | -.081        | .184         |
| Making Positive Contribution To Society   | .047              | .043                     | .800         | .168         |
| Servicing The Needs Of The Community      | .016              | -.047                    | .739         | .348         |
| Ensuring The Welfare Of Employees         | -.055             | .373                     | .583         | .215         |
| Hiring The Best Expertise Available       | .210              | .328                     | .550         | -.076        |
| Being Known As An Excellent Competitor    | .107              | .457                     | .491         | -.025        |
| Ensuring Financial Security For Family    | -.019             | .267                     | .149         | .774         |
| Keeping The Business In The Family        | .148              | .077                     | .035         | .747         |
| Maintaining Family Harmony                | .183              | .039                     | .341         | .627         |
| Variance Explained                        | 30.19             | 11.51                    | 8.52         | 6.88         |
| Reliability Alpha                         | .7878             | .6445                    | .7503        | .7036        |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

<sup>a</sup> Rotation converged in 10 iterations

**Table 2: Correlation of Succession Planning and Governance**

| Pearson Correlation<br>Sig. (2-tailed)            | 1             | 2             | 3             | 4             | 5             | 6             | 7             | 8            | 9     |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|-------|
| (1) Estate Plan Covering Disposal Assets          | 1.000         |               |               |               |               |               |               |              |       |
| (2) Shareholder Agreement Acq/Disp Stock          | .447<br>.000  | 1.000         |               |               |               |               |               |              |       |
| (3) Succession preparedness                       | -.349<br>.000 | -.178<br>.014 | 1.000         |               |               |               |               |              |       |
| (4) Succession Effectiveness                      | -.105<br>.149 | .006<br>.936  | .348<br>.000  | 1.000         |               |               |               |              |       |
| (5) #Generations Since Family Started<br>Business | -.315<br>.000 | -.173<br>.025 | .219<br>.003  | .148<br>.047  | 1.000         |               |               |              |       |
| (6) Firm Size                                     | -.108<br>.141 | -.178<br>.015 | .300<br>.000  | .166<br>.019  | .197<br>.009  | 1.000         |               |              |       |
| (7) Country of survey (Canada, Hong Kong)         | .349<br>.000  | .188<br>.009  | -.411<br>.000 | -.015<br>.830 | -.266<br>.000 | -.159<br>.025 | 1.000         |              |       |
| (8) Firm Have Board Of Directors/Council          | .055<br>.451  | .158<br>.031  | -.051<br>.479 | -.054<br>.453 | -.098<br>.195 | -.280<br>.000 | -.091<br>.201 | 1.000        |       |
| (9) # Annual Family Meetings Discuss Firm         | -.143<br>.064 | .029<br>.707  | .241<br>.001  | .175<br>.021  | -.008<br>.920 | .057<br>.461  | -.326<br>.000 | .064<br>.412 | 1.000 |

**Table 3: Correlation Matrix of Study Variables**

| Pearson Correlation<br>Sig. (2-tailed)<br>N=205 | 1             | 2             | 3             | 4             | 5             | 6             | 7             | 8             | 9             | 10            | 11            | 12            | 13            | 14            | 15            | 16            | 17           | 18    |  |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|-------|--|
| 1. Country                                      | 1.000         |               |               |               |               |               |               |               |               |               |               |               |               |               |               |               |              |       |  |
| 2. Size   | -.159<br>.025 | 1.000         |               |               |               |               |               |               |               |               |               |               |               |               |               |               |              |       |  |
| 3. Low Cost                                     | .060<br>.389  | .050<br>.480  | 1.000         |               |               |               |               |               |               |               |               |               |               |               |               |               |              |       |  |
| 4. Differentiation                              | .429<br>.000  | -.109<br>.126 | .000<br>1.000 | 1.000         |               |               |               |               |               |               |               |               |               |               |               |               |              |       |  |
| 5. Family Goals                                 | .298<br>.000  | -.104<br>.146 | .000<br>1.000 | .000<br>1.000 | 1.000         |               |               |               |               |               |               |               |               |               |               |               |              |       |  |
| 6. Social Goals                                 | .303<br>.000  | -.087<br>.224 | .000<br>1.000 | .000<br>1.000 | .000<br>1.000 | 1.000         |               |               |               |               |               |               |               |               |               |               |              |       |  |
| 7. Succession<br>preparedness                   | -.411<br>.000 | .300<br>.000  | -.013<br>.851 | -.258<br>.000 | -.314<br>.000 | -.070<br>.317 | 1.000         |               |               |               |               |               |               |               |               |               |              |       |  |
| 8. # Years Ago Plan<br>Made Public              | -.236<br>.166 | .112<br>.516  | -.107<br>.536 | .073<br>.673  | -.320<br>.057 | .344<br>.040  | .131<br>.445  | 1.000         |               |               |               |               |               |               |               |               |              |       |  |
| 9. Who Made Choice Of<br>Successor              | .183<br>.185  | .172<br>.219  | -.024<br>.865 | -.160<br>.248 | .319<br>.019  | -.216<br>.116 | -.135<br>.330 | -.153<br>.497 | 1.000         |               |               |               |               |               |               |               |              |       |  |
| 10. Successor<br>Experience                     | -.445<br>.002 | -.020<br>.894 | .018<br>.907  | .003<br>.983  | -.297<br>.045 | -.337<br>.022 | .432<br>.003  | .314<br>.177  | -.017<br>.913 | 1.000         |               |               |               |               |               |               |              |       |  |
| 11. Preparedness x<br>Differentiation           | .415<br>.000  | -.092<br>.197 | .002<br>.979  | .908<br>.000  | -.020<br>.771 | .028<br>.689  | -.310<br>.000 | .183<br>.285  | -.134<br>.332 | .029<br>.851  | 1.000         |               |               |               |               |               |              |       |  |
| 12. Preparedness x<br>Family Goals              | .347<br>.000  | -.121<br>.089 | .018<br>.797  | -.019<br>.788 | .936<br>.000  | .062<br>.375  | -.395<br>.000 | -.301<br>.074 | .215<br>.119  | -.342<br>.020 | -.002<br>.976 | 1.000         |               |               |               |               |              |       |  |
| 13. Preparedness x Low<br>Cost                  | .066<br>.345  | .044<br>.537  | .934<br>.000  | .002<br>.981  | .018<br>.799  | -.013<br>.857 | -.005<br>.947 | -.097<br>.572 | -.051<br>.717 | .029<br>.849  | .002<br>.981  | .013<br>.855  | 1.000         |               |               |               |              |       |  |
| 14. Preparedness x<br>Social Goals              | .301<br>.000  | -.090<br>.207 | -.013<br>.856 | .026<br>.712  | .062<br>.377  | .922<br>.000  | -.109<br>.120 | .313<br>.063  | -.184<br>.183 | -.327<br>.027 | .036<br>.612  | .132<br>.059  | -.022<br>.757 | 1.000         |               |               |              |       |  |
| 15. Preparedness x<br>Experience                | -.357<br>.000 | .165<br>.021  | -.030<br>.667 | -.103<br>.140 | -.316<br>.000 | -.110<br>.117 | .667<br>.000  | .293<br>.083  | -.085<br>.541 | .950<br>.000  | -.150<br>.032 | -.455<br>.000 | -.032<br>.647 | -.172<br>.014 | 1.000         |               |              |       |  |
| 16. Succession<br>Effectiveness                 | -.015<br>.830 | .166<br>.019  | .024<br>.732  | -.135<br>.054 | -.124<br>.077 | .045<br>.524  | .348<br>.000  | .164<br>.339  | -.026<br>.854 | .190<br>.207  | -.139<br>.047 | -.173<br>.013 | .010<br>.891  | .007<br>.921  | .327<br>.000  | 1.000         |              |       |  |
| 17. Relative<br>Performance                     | .322<br>.000  | -.341<br>.000 | .147<br>.037  | .364<br>.000  | .114<br>.106  | .258<br>.000  | -.293<br>.000 | .014<br>.938  | -.210<br>.127 | .061<br>.687  | .334<br>.000  | .172<br>.015  | .105<br>.139  | .263<br>.000  | -.168<br>.017 | -.092<br>.193 | 1.000        |       |  |
| 18. Revenue Growth                              | .274<br>.000  | -.248<br>.001 | -.029<br>.683 | .177<br>.012  | .079<br>.267  | .090<br>.205  | -.252<br>.000 | .043<br>.802  | -.143<br>.301 | .076<br>.614  | .156<br>.028  | .117<br>.099  | -.038<br>.591 | .101<br>.155  | -.171<br>.016 | -.237<br>.001 | .326<br>.000 | 1.000 |  |

**Table 4: Hierarchical Regression of Model**

| Dependent Variable   | Relative Performance |       |        |      | Succession Effectiveness |       |        |      | Revenue Growth |       |        |      |
|--|----------------------|-------|--------|------|--------------------------|-------|--------|------|----------------|-------|--------|------|
|  | B                    | Beta  | t      | Sig. | B                        | Beta  | t      | Sig. | B              | Beta  | t      | Sig. |
| 1 Country Size   | .541                 | .273  | 4.251  | .000 | .024                     | .010  | .143   | .886 | .937           | .238  | 3.542  | .000 |
|  | -.223                | -.292 | -4.536 | .000 | .148                     | .161  | 2.287  | .023 | -.309          | -.203 | -3.027 | .003 |
|  | .430                 |       |        |      | .160                     |       |        |      | .336           |       |        |      |
|  | .185                 |       |        |      | .025                     |       |        |      | .113           |       |        |      |
|  | .177                 |       |        |      | .016                     |       |        |      | .104           |       |        |      |
| 2 Differentiation Strategy<br>Family Goals<br>Low Cost Strategy<br>Social Goals<br>Succession Preparedness<br># Years Plan Made Public<br>Who Made Choice Of Successor<br>Successor Experience | .280                 | .282  | 4.120  | .000 | -.161                    | -.134 | -1.754 | .081 | .052           | .026  | .337   | .736 |
|  | .060                 | .061  | .938   | .350 | -.074                    | -.062 | -.853  | .395 | -.040          | -.020 | -.276  | .783 |
|  | .150                 | .151  | 2.562  | .011 | .017                     | .014  | .215   | .830 | -.070          | -.036 | -.533  | .595 |
|  | .226                 | .228  | 3.501  | .001 | .0064                    | .001  | .007   | .994 | .012           | .006  | .080   | .937 |
|  | -.111                | -.124 | -1.767 | .079 | .389                     | .360  | 4.587  | .000 | -.253          | -.142 | -1.781 | .077 |
|  | -.018                | -.021 | -.341  | .734 | .061                     | .057  | .836   | .404 | .045           | .026  | .370   | .712 |
|  | -.118                | -.078 | -1.278 | .203 | -.012                    | -.007 | -.097  | .923 | -.211          | -.070 | -1.012 | .313 |
|  | .032                 | .109  | 1.759  | .080 | .006                     | .017  | .245   | .807 | .053           | .093  | 1.315  | .190 |
|  | .575                 |       |        |      | .404                     |       |        |      | .375           |       |        |      |
|  | .331                 |       |        |      | .163                     |       |        |      | .140           |       |        |      |
| .296   |                      |       |        | .120 |                          |       |        | .096 |                |       |        |      |
| .119   |                      |       |        | .104 |                          |       |        | .000 |                |       |        |      |
| 3 Preparedness x Differentiation<br>Preparedness x Family Goals<br>Preparedness x Low Cost<br>Preparedness x Social Goals<br>Preparedness x Experience   | -.047                | -.126 | -.827  | .410 | .031                     | .069  | .408   | .683 | -.149          | -.200 | -1.153 | .250 |
|  | .113                 | .328  | 1.579  | .116 | -.064                    | -.155 | -.673  | .502 | .064           | .094  | .396   | .692 |
|  | -.076                | -.224 | -1.320 | .188 | -.051                    | -.123 | -.655  | .514 | -.076          | -.112 | -.577  | .565 |
|  | .017                 | .049  | .302   | .763 | -.029                    | -.072 | -.400  | .689 | .014           | .020  | .107   | .915 |
|  | -.002                | -.035 | -.292  | .771 | .017                     | .324  | 2.444  | .015 | -.015          | -.172 | -1.261 | .209 |
|  | .595                 |       |        |      | .453                     |       |        |      | .397           |       |        |      |
|  | .354                 |       |        |      | .205                     |       |        |      | .157           |       |        |      |
| .303   |                      |       |        | .142 |                          |       |        | .090 |                |       |        |      |
| .007   |                      |       |        | .022 |                          |       |        | .000 |                |       |        |      |



**Table 5: Regression of Complete Model**

| Dependent Variable             | Relative Performance |       |        |       | Succession Effectiveness |       |        |       | Revenue Growth |       |        |       |
|--------------------------------|----------------------|-------|--------|-------|--------------------------|-------|--------|-------|----------------|-------|--------|-------|
|                                | B                    | Beta  | t      | Sig.  | B                        | Beta  | t      | Sig.  | B              | Beta  | t      | Sig.  |
| (Constant)                     | .527                 |       | 1.037  | .301  | 1.951                    |       | 2.869  | .005  | 2.171          |       | 1.877  | .062  |
| Country                        | .062                 | .031  | .399   | .690  | .590                     | .247  | 2.840  | .005  | .811           | .206  | 2.295  | .023  |
| Size                           | -.178                | -.233 | -3.742 | .000  | .058                     | .063  | .914   | .362  | -.229          | -.150 | -2.112 | .036  |
| Differentiation Strategy       | .409                 | .413  | 2.715  | .007  | -.261                    | -.219 | -1.296 | .197  | .420           | .213  | 1.226  | .222  |
| Family Goals                   | -.233                | -.236 | -1.225 | .222  | .130                     | .109  | .511   | .610  | -.244          | -.124 | -.564  | .573  |
| Low Cost Strategy              | .353                 | .356  | 2.107  | .036  | .164                     | .137  | .733   | .465  | .126           | .064  | .331   | .741  |
| Social Goals                   | .167                 | .169  | 1.058  | .291  | .079                     | .067  | .377   | .707  | -.030          | -.015 | -.083  | .934  |
| Succession Preparedness        | -.072                | -.080 | -.881  | .379  | .198                     | .183  | 1.818  | .071  | -.110          | -.062 | -.596  | .552  |
| # Years Plan Made Public       | -.002                | -.003 | -.050  | .960  | .031                     | .029  | .403   | .687  | .092           | .052  | .704   | .482  |
| Who Made Choice Of Successor   | -.118                | -.078 | -1.266 | .207  | -.030                    | -.016 | -.242  | .809  | -.222          | -.073 | -1.048 | .296  |
| Successor Experience           | .042                 | .147  | 1.707  | .089  | -.054                    | -.156 | -1.638 | .103  | .110           | .191  | 1.947  | .053  |
| Preparedness x Differentiation | -.047                | -.126 | -.827  | .410  | .031                     | .069  | .408   | .683  | -.149          | -.200 | -1.153 | .250  |
| Preparedness x Family Goals    | .113                 | .328  | 1.579  | .116  | -.064                    | -.155 | -.673  | .502  | .064           | .094  | .396   | .692  |
| Preparedness x Low Cost        | -.076                | -.224 | -1.320 | .188  | -.051                    | -.123 | -.655  | .514  | -.076          | -.112 | -.577  | .565  |
| Preparedness x Social Goals    | .017                 | .049  | .302   | .763  | -.029                    | -.072 | -.400  | .689  | .014           | .020  | .107   | .915  |
| Preparedness x Experience      | -.002                | -.035 | -.292  | .771  | .017                     | .324  | 2.444  | .015  | -.015          | -.172 | -1.261 | .209  |
| R                              | .595                 |       |        |       | .453                     |       |        |       | .397           |       |        |       |
| R Square                       | .354                 |       |        |       | .205                     |       |        |       | .157           |       |        |       |
| Adjusted R Square              | .303                 |       |        |       | .142                     |       |        |       | .090           |       |        |       |
|                                | SS                   | df    | MSq    | F     | SS                       | df    | MSq    | F     | SS             | df    | MSq    | F     |
| Regression                     | 70.76                | 15    | 4.718  | 6.899 | 59.69                    | 15    | 3.980  | 3.253 | 124.83         | 15    | 8.320  | 2.352 |
| Residual                       | 129.24               | 189   | .684   |       | 231.23                   | 189   | 1.223  |       | 668.73         | 189   | 3.538  |       |
| Total                          | 200.00               | 204   |        |       | 290.93                   | 204   |        |       | 793.53         | 204   |        |       |