AN INVESTIGATION INTO THE TEAM INPUT FACTORS INFLUENCING THE SUCCESS OF FAMILY BUSINESSES*

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ABSTRACT

In recent years, across the globe, the use of teams in organisations has increased substantially. This trend is expected to continue as organisations strive to meet the demands of an increasingly complex business environment. It is suggested that parallels can be drawn between the concepts business family and team, and that the business family is a type of team who share responsibility for the success of one or more business enterprises. Given the increasing number of sibling teams among family businesses, as well as the challenges they face as team members, this paper focuses on sibling teams in family businesses and the conditions that are required to ensure their success. Consequently, the primary objectives of this paper are to identify the input factors influencing the effectiveness of a Sibling Partnership, to propose a conceptual model based on these factors and to subject the model to empirical testing.

A structured questionnaire was distributed to 1323 sibling partner respondents. The respondents were identified by means of a convenience snowball sampling technique and the data collected from 371 usable questionnaires was subjected to various statistical analyses. An exploratory factor analysis was conducted and Cronbach-alpha coefficients were calculated to confirm the validity and reliability of the measuring instrument. Structural equation modelling was used to test the significance of the relationships hypothesised in the conceptual model.

The empirical findings of this study show that *Internal context*, *Complementary skills*, *Shared dream* and *Leadership* are important determinant of sibling team effectiveness, whereas *Division of labour* and *Governance* are not. These findings have implications for both succession strategy and planning in family businesses. Family businesses would do well to ensure that the conditions, as suggested by this paper, are in place or at least possible, should they wish a satisfactory outcome.

Keywords: Family business, Sibling Partnership, Family team, Team.

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INTRODUCTION AND PROBLEM STATEMENT

In recent years, across the globe, the use of teams in many different types of organisations has been increasing substantially. This trend is expected to continue as organisations strive to meet the demands of an increasingly complex business environment (Doolen, Hacker and Van Aken, 2006; Kozlowski and Ilgen, 2006; Olukayode and Ehigie, 2005). Research shows that effective teams develop strategies that lead to higher organisational performance, and many organisations have reported a great deal of success using teams to undertake activities (Greenberg and Baron, 2000; Hitt, Miller and Colella, 2006; Ivancevich, Konopaske and Matteson, 2005).

The word "team" is standard terminology in business today, referring to a group of associated persons organised to work together in pursuit of a shared goal (Hogan, 2007; Keen, 2003). As part of a team, members share a common culture, a set of rituals and processes, and a philosophy of working together. They are internally accountable to each other, and because each member brings a special set of skills, the performance of a team is said to be "synergistic" or greater than the performance of individuals working alone (Ivancevich *et al*., 2005).

Against this background, one can describe the members of a family in business together, as a team, albeit one where familial relationships exist between the members. The fact that membership of the family is biologically determined is what sets families apart from other social systems. The "business family" refers to a subgroup of individuals from the same family who have the common goal of owning and running one or more businesses together (Poutziouris, Smyrnios and Klein, 2006). Poutziouris *et al*., (2006) assert that parallels can be drawn between the concepts "business family" and "team", and that the business family is a type of team which share responsibility for the success of one or more business enterprises. Because a business family can be viewed as a type of team, research to date concerning teams in general is also relevant to business families.

Despite the concept of "team" having been found in only a few past references in the family business research literature (Poutziouris *et al*., 2006), several types of family teams exist. Their nature depends on the family and non-family members involved. Increasingly, attention is being given to various types of family teams in the family business literature, particularly copreneurships (Stewart-Gross and Gross, 2007; Marshack, 1993; Rutherford, Muse and Oswald, 2006) and Sibling Partnerships (Nelton, 1996; Ward, 2004). It has even been suggested that although succession has been the main issue of concern among family businesses for the past decade, team management among family businesses should be a major focus in the years to come (Sharma, 2004).

Given that an increasing number of family businesses are being passed on during the succession process to teams of siblings, or adopting Sibling Partnerships as ownership structures (Aronoff, Astrachan, Mendosa and Ward, 1997; Ward, 2004), the importance of such family business teams (sibling teams) should be emphasised. A sibling team in a family business, despite its unique nature, is basically a team just like any other team in an organisational context. This being the case, the organisational concepts of effective teams are as relevant to sibling teams as they are to other teams.

Sibling Partnerships are, however, an unproven approach to family business leadership (Ward, 2004), and there is a lack of understanding about what goes into creating and maintaining such partnerships in practice (Gage, Gromala and Kopf, 2004; Gersick, Davis, McCollom Hampton and Lansberg, 1997; Ward, 2004). As a result, many Sibling Partnerships fail, and often do not carry on to the next generation (Gage *et al*., 2004; Ward, 1997).

Turning any group of people into a team is a difficult task. According to Aronoff *et al*. (1997: 29), however, forging two or more siblings into a team is especially difficult. Yet if they desire to have a successful Sibling Partnership in a family business, the siblings have to somehow mould themselves into a team (Ward, 2004: 66). Teamwork and collaboration are critical to the success of their partnership and their business (Aronoff *et al*., 1997; Gage *et al*., 2004; Lansberg, 1999: 20; Ward, 2004). Given the increasing number of sibling teams among family businesses, as well as the challenges they face as team members, this paper and the ensuing empirical investigation focuses on sibling teams in family businesses and the conditions that are required to ensure their success.

PRIMARY OBJECTIVES

A paucity of research or even anecdotal information on sibling teams in the family business literature exists (Gage *et al*., 2004). Most prior research on sibling teams (Sibling Partnerships) is only a small or tangential part of a larger focus on other or broader family-firm issues (Sonfield and Lussier, 2004). This being the case, no established theory adequately describes sibling behaviour in family firms (Handler, 1991), and little is understood about the important world of adult sibling relationships (Friedman, 1991). Given the predicted trend towards team leadership in family firms (Sharma, 2004), the increasing number of family businesses whose management is passed on to teams of siblings, and the need to validate the impact of team characteristics in the context of business families, research needs to be directed towards identifying and understanding the conditions necessary to make sibling teams function effectively in family businesses.

To function effectively, certain basic elements need to exist in the working conditions of a team; the extent to which these elements are present increases the chances of a successful team outcome (Hofstrand, 2000; Schneider and Schneider, 2002). The primary objectives of this paper are to identify these basic elements, or team input factors, influencing the effectiveness of a Sibling Partnership, to propose a conceptual model based on these factors, and to subject the model to empirical testing using Structural Equation Modelling. Poutziouris *et al*. (2006) suggest that in order to provide better insights into the determinants of effectiveness of family firms, the vast body of research on teams should be integrated with research in the field of family business. By applying theories from the teamwork literature to identify and develop a conceptual model of factors influencing the effective functioning of a Sibling Partnership, this paper attempts to do just that.

As the focus of this paper is on investigating the factors influencing the ability of siblings to work together as team members in their family business, the concepts “Sibling Partnership” and “sibling team” are used interchangeably and synonymously, and refer to a family business where at least two brothers and/or sisters with a familial bond, are actively involved in the management and/or decision-making of the business, and exercise considerable influence over its strategic direction. This delineation places the decision-making authority of the family business in the hands of the two or more siblings.

ATTRIBUTES OF EFFECTIVE SIBLING TEAMS

A large body of knowledge exists on how to build effective teams, and on identifying factors related to team effectiveness (Kozlowski and Ilgen, 2006; Robbins, 2003). Several general models of effective teams have been proposed by, amongst others, Hellriegel, Jackson, Slocum, Staude, Amos, Klopper, Louw and Oosthuizen (2004); Kreitner and Kinicki (1995); Mondy and Premeaux (1995); and Robbins (2003). These and the classic models of Campion, Medsker and Higgs (1993), Gladstein (1984) and Hackman (1987), integrate current knowledge about what makes teams effective (Robbins, 2003: 263). These normative models are useful for highlighting the important factors to be considered when teams, and the supporting organisational system, are configured (Kozlowski and Ilgen, 2006). Although these models differ in many respects, they all, implicitly or explicitly, address similar issues of near-universal importance to all teams, and the suggestions offered in the literature can be applied to almost any team, in almost any context (Guzzo and Dickson, 1996; Yancey, 1998), including family businesses.

The input-process-output (I-P-O) model, which proposes that inputs lead to processes that in turn lead to outcomes, is the most common framework used to explain the way in which team design elements interact to enable effective team outcomes (e.g. Barrick, Stewart, Neubert and Mount, 1998; Campion *et al*., 1993; Gladstein, 1984; Groesbeck and Van Aken, 2001; Hackman, 1990). The I-P-O model posits that a variety of inputs combine to influence intra-group processes, which in turn affect team outputs. *Inputs* refer to the composition of the team in terms of the constellation of individual characteristics and resources at multiple levels (individual, team, organisational). *Processes* refer to the activities that team members engage in, in combining their resources to resolve (or fail to resolve) task demands. Processes thus mediate the translation of inputs to outcomes (outputs). *Output* has three facets: performance judged by relevant others external to the team; meeting of team member needs or team-member satisfaction; and viability or the willingness of members to remain in the team. These tripartite facets capture the prevalent conceptualisation of team effectiveness (Barrick *et al*., 1998; Kozlowski and Ilgen, 2006).

Substantial teamwork research has examined various *inputs* of the I-P-O model (Howard, Foster and Shannon, 2005). For example, Campion *et al*. (1993) have found that almost all of their proposed input variables or design characteristics of work groups, relate to one or more of their three criteria of team effectiveness. These results have been confirmed in a follow-up study (Campion, Papper and Medsker, 1996). According to Poutziouris *et al*. (2006), the teamwork literature suggests that business families with characteristics such as a shared vision, clear roles and clear procedures, as well as a high level of individual talent, are likely to operate more effectively than business families without such characteristics. In an attempt to apply the teamwork literature to family businesses and to confirm the suggestions of Poutziouris *et al*., the focus of this paper is on the input factors only and the impact that these factors have on sibling teams in family businesses.

PROPOSED CONCEPTUAL MODEL

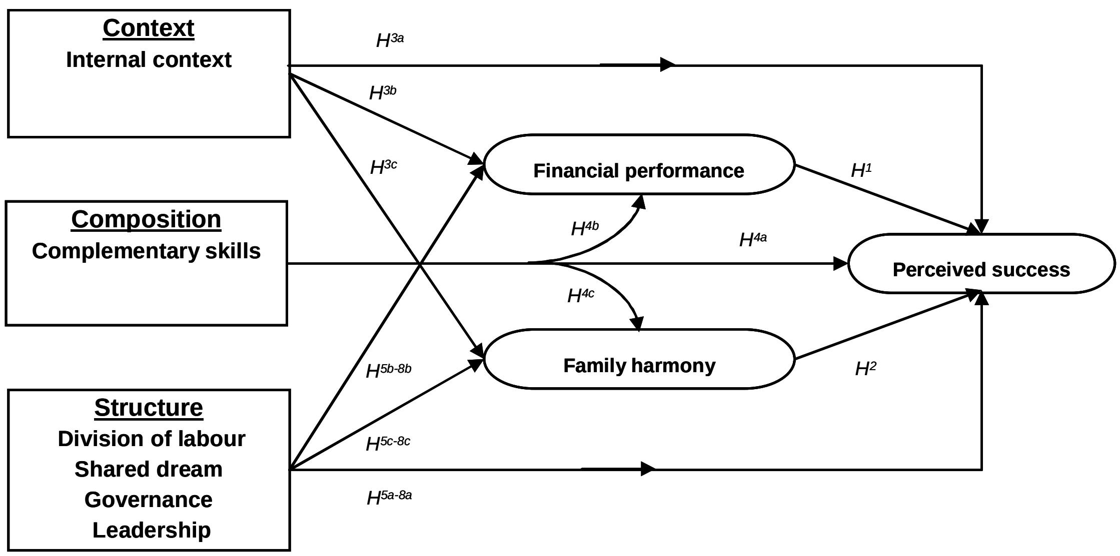
Based on secondary sources from the fields of Psychology, Organisational Behaviour and family business, as well as anecdotal evidence and the opinions of experts, a conceptual model depicting the potential influence of team input factors on Sibling Partnerships, was constructed.

The factors included in the proposed conceptual model are justified by sufficiency of theory in both the teamwork and family business literature, and claims are not made that the model has an exhaustive coverage of every possible factor influencing the effectiveness of a Sibling Partnership. As such, the model is based on an integration of prior findings and theories on team effectiveness, and is supported by empirical or anecdotal evidence reported in the family business literature. Where appropriate the team input factors have been renamed based on synonymous terminology found in the family business literature. The conceptual model proposed (Figure 1) is based on the teamwork models of Gladstein (1984), Hackman (1987) and Campion *et al*. (1993), as well as on a review of team effectiveness and family business literature.

In the conceptual model below, the various team input factors identified as influencing the success of a Sibling Partnership are divided into three main categories of constructs, namely the *context*, *composition*, and *structure* categories. Six underlying independent variables, which could possibly influence the *Perceived success* of sibling teams, are derived from these three constructs. Effectiveness or success in this study is measured using three variables: the dependent variable *Perceived success*; and two intervening variables, namely *Financial performance* and *Family harmony*. As such, the model proposes that both the *Financial* *performance* of the business and the *Family harmony* that exists within the family business positively influence *Perceived* success. Anecdotal, editorial and empirical support has been found in both the teamwork and in the family business literature supporting the hypothesised relationships between the six independent variables, and the three measures of sibling team effectiveness.

FIGURE 1

PROPOSED CONCEPTUAL MODEL: TEAM INPUT FACTORS INFLUENCING THE PERCEIVED SUCCESS OF SIBLING PARTNERSHIPS



DEPENDENT AND INTERVENING VARIABLES

As illustrated in Figure 1, the dependent variable in the proposed conceptual model is the *Perceived success* of a Sibling Partnership, which is defined as the degree to which the siblings find their ongoing involvement in the Sibling Partnership to be satisfying. Ambiguous definitions and biased perceptions make the assessment and measurement of success a challenging task for any family business (Hienerth and Kessler, 2006: 115). No single measure of performance adequately expresses family and business needs and utilities, and no measure is likely to capture the complexities of the family business in particular (Astrachan, 2006). Consequently, success, like beauty and fairness, is in the eye of the beholder. The satisfaction of family members involved in a family business is, however, commonly associated with success in family business research (Handler, 1991; Ivancevich *et al.*, 2005; Sharma, 2004; Venter, 2003). Team-member satisfaction, as a measure of team effectiveness, has also been used in a number of studies assessing team effectiveness in organisations (e.g. Campion *et al*., 1996; Doolen *et al*., 2006: 140; Howard *et al*., 2005). In addition to the team members' satisfaction with the team experience, Kreitner and Kinicki (1995) propose that the team members' willingness to continue contributing to the team effort is also a measure of team effectiveness.

Business performance (financial and growth) is commonly regarded as a measure of success, and has been used by several authors to distinguish between successful and unsuccessful successions (Adendorff, 2004; Flören, 2002; Venter, 2003), successors (Goldberg, 1996), family businesses (Sharma, 2004; Ward, 2004) and even teams in general (Ivancevich *et al*., 2005; Northouse, 2004). In addition, both anecdotal (Flören, 2002; Sharma, 2004; Ward, 2004) and empirical evidence (Malone, 1989; Santiago, 2000; Venter, 2003) suggests that harmonious relationships between family members are important for successful successions and successful family businesses.

Intuitively, it is highly unlikely that siblings in a Sibling Partnership characterised by disharmonious family relationships and poor financial performance would find their involvement to be satisfying, let alone want to continue being involved. Consequently, in addition to direct effects, the conceptual model (Figure 1) implies that *Financial performance* and *Family harmony* act as intervening variables between the various input variables, and the dependent variable *Perceived success*. For the purpose of this study, *Financial performance* refers to positive trends of growth in number of employees and profit, as well as increasing revenue experienced by the Sibling Partnership. *Family harmony*, on the other hand, is defined as mutual relationships among family members, which are characterised by closeness, caring and support, appreciation of each other, and concern for each other’s welfare. Against this background the following hypotheses have been formulated:

H^1: There is a positive relationship between the perceived *Financial performance* of the Sibling Partnership and the *Perceived success* of the Sibling Partnership.

H^2: There is a positive relationship between the level of *Family harmony* existing in the Sibling Partnership and the *Perceived success* of the Sibling Partnership.

INDEPENDENT VARIABLES

Internal context

For a team to perform successfully, an internal organisational context should exist that provides team members with the necessary support and infrastructure to complete the task at hand effectively (Hitt *et al*., 2006; Robbins, 2003). In general, organisational context variables measure the extent to which a team is provided with the resources or support it needs to be successful (Doolen *et al*., 2006). Some evidence exists that a group's context might be a more important requirement for success than either team composition or team processes (Howard *et al*., 2005). In this study the factor *Internal context* refers to the internal environment of the Sibling Partnership, specifically in terms of access to adequate and suitable resources, information, equipment, employees, and working conditions. Based on the anecdotal and empirical evidence presented above, the following hypotheses have been formulated:

H^{3a}: There is a positive relationship between the extent that an *Internal context* exists in the Sibling Partnership and the *Perceived success* of the Sibling Partnership.

H^{3b}: There is a positive relationship between the extent that an *Internal context* exists in the Sibling Partnership and the perceived *Financial performance* of the Sibling Partnership.

H^{3c}: There is a positive relationship between the extent that an *Internal context* exists in the Sibling Partnership and the level of *Family harmony* existing in the Sibling Partnership.

Complementary skills

"Team composition" refers to variables that relate to how teams should be staffed (Robbins, 2003), and addresses who team members are, and what attributes, skills, abilities and knowledge they bring to the team (Guzzo and Dickson, 1996; Hitt *et al*., 2006). A team's composition must be such that it fosters competent task work and maximum performance (Northouse, 2004; Stevens and Campion, 1999). "Composition" describes the make-up of the sibling team. For the purpose of this study, the composition of the sibling team is measured using a single factor, namely *Complementary skills*. This factor incorporates both competencies and heterogeneity among team members. Although the team work literature proposes other composition factors (e.g. team size and job tenure) as influencing team effectiveness, little reference is made to these factors in this family business literature. For the purpose of this study *Complementary skills* refers to the extent to which the siblings are competent and are competent in different areas (i.e. they have diversity in their team). Teams function most effectively when composed of highly skilled and competent individuals who can bring a diverse set of complementary skills and experiences to the task at hand (Hitt *et al*., 2006; Robbins, 2003). Team member heterogeneity in terms of abilities and experiences has been found to have a positive effect on team performance (Gladstein, 1984; Hackman, 1987). Similarly, for a Sibling Partnership to succeed, the siblings should also have a more-or-less even distribution of complementary skills and talents among them (Aronoff *et al*., 1997; Gersick *et al*., 1997; Lansberg, 1999). The following relationships are therefore hypothesised:

H^{4a}: There is a positive relationship between the extent that *Complementary skills* exist among the siblings and the *Perceived success* of the Sibling Partnership.
H^{4b}: There is a positive relationship between the extent that *Complementary skills* exist among the siblings and the perceived *Financial performance* of the Sibling Partnership.
H^{4c}: There is a positive relationship between the extent that *Complementary skills* exist among the siblings and the level of *Family harmony* existing in the Sibling Partnership.

Structure

"Structure" relates to the nature of the tasks (task structure) to be completed by the team and the division of roles and responsibilities (team structure) among team members (Kozlowski and Ilgen, 2006: 83). According to Gladstein (1984) as well as Hackman and Walton (1986), a common purpose and shared goals, norms and codes of conduct, and leadership, are also underlying components of structure. Teams with appropriate structures can meet the needs of the team, as well as accomplish team goals (Larson and LaFasto, 1989). Based on the important findings of Gladstein (1984) and Campion *et al*. (1993), who did not find a relationship between group structure variables task identity and task interdependence, and measures of team effectiveness, the nature of the task is not included as an aspect of structure or as an independent factor in the present study. Consequently, for the purpose of this study, the input variable *structure* consists of four underlying components, namely *Division of labour*, *Shared dream*, *Governance*, and *Leadership*.

Division of labour

In effective teams, members mutually agree on responsibilities (Keen, 2003; Robbins, 2003) as well as job descriptions, and individual tasks and responsibilities are specified and clearly laid out (Hitt *et al*., 2006). Several studies (e.g. Ancona and Caldwell, 1992; Keck, 1997) show that functional assignment diversity (the existence of distinct organisational roles or positions) affects the performance of a firm. Effective Sibling Partnerships typically have an explicit agreed-to division of labour, so that each of the sibling partners can enjoy a degree of autonomy in his or her specific area (Aronoff *et al*., 1997; Handler, 1991; Lansberg, 1999). Handler (1991) concludes from her study that separate positions and areas of responsibility promote a positive relationship between siblings. In the present study, the variable *Division of labour* refers to each sibling being assigned a clearly demarcated area of authority and responsibility. The extent to which the sibling partners agree on these areas of authority and responsibility is also incorporated into this construct. Consequently, the following relationships are hypothesised:

H^{5a}: There is a positive relationship between the extent that *Division of labour* exists among the siblings and the *Perceived success* of the Sibling Partnership.

H^{5b}: There is a positive relationship between the extent that *Division of labour* exists among the siblings and the perceived *Financial performance* of the Sibling Partnership.

H^{5c}: There is a positive relationship between the extent that *Division of labour* exists among the siblings and the level of *Family harmony* existing in the Sibling Partnership.

Shared vision

A shared vision encompasses what Lansberg (1999) refers to as "a shared dream" and a common sense of purpose (Aronoff *et al*., 1997; Lansberg, 1999; Ward, 2004). For a Sibling Partnership to succeed, it is essential that the sibling partners share a common vision (Faulkner, 2007; Gage *et al*., 2004; Lansberg, 1999) and common goals (Bettis, 2002; Brigham, 2004; Hofstrand, 2000). A shared vision promotes coherence in stakeholders' expectations and opinions on organisational goals, and consequently promotes cooperative behaviour through clarified role interactions (Ring and Van de Ven, 1994). Established role interactions and shared vision reduce the threat of opportunistic behaviour, and help establish a social norm of reciprocity, which reinforces commitment to jointly agreed decisions (Uzzi, 1996; Mustakallio, Autio and Zahra, 2002). A balance between individual dreams and the shared dream is essential to the psychological well-being of all family members, as well as to the harmony of the family business (Lansberg, 1999). In addition, Leana and Van Buren (1999) contend that a shared vision among the members of the owner family demonstrates to other constituencies that the family is cohesive, and that there is cooperation with respect to realising their collective ownership-related goals.

Studies among teams in general also illustrate a significant relationship between the existence of clear goals and measures of team effectiveness (Denison, Lief and Ward, 2004; Doolen *et al*., 2006; Guzzo and Dickson, 1996; Hyatt and Ruddy, 1997). For the purpose of this study, *Shared dream* refers to the dreams that individual siblings have for themselves in the Sibling Partnership as being aligned with each other's dreams (hence they are agreed on and shared), and that their involvement in the Sibling Partnership is entirely willing and voluntary. The extent to which the siblings have agreed on the future direction (vision and goals) of the Sibling Partnership, is also a dimension of this construct. Based on the anecdotal and empirical evidence presented above, the following hypotheses have been formulated:

H^{6a}: There is a positive relationship between the extent to which a *Shared dream* exists among the siblings and the *Perceived success* of the Sibling Partnership.

H^{6b}: There is a positive relationship between the extent to which a *Shared dream* exists among the siblings and the perceived *Financial performance* of the Sibling Partnership.

H^{6c}: There is a positive relationship between the extent to which a *Shared dream* exists among the siblings and the level of *Family harmony* existing in the Sibling Partnership.

Governance

Governance structures, such as advisory boards, boards of directors and frequent family meetings, are increasingly emphasised as important correlates with both family business longevity and firm performance (Astrachan and Aronoff, 1998; Astrachan and Kolenko, 1994). Anecdotal evidence suggests that the implementation of governance structures, policies and procedures promotes family business success, stimulates growth and contributes to the continuity as well as sustainability of the family business (Aronoff *et al*., 1997; Lansberg, 1999; Ward, 2004). Hauser (2004) maintains that well-governed families also manage well-governed businesses, which in turn earn consistently high profits. Poza, Alfred and Maheshwari (1997) conclude from their research that communication and mechanisms to make such communication more systematic, such as family meetings, seem to be important components of both a positive family culture and a well-run family firm. In addition, the findings of Poza *et al*. (1997) support the notion that family retreats and family councils can play an important role in family-owned business effectiveness and continuity. The literature suggests that governance structures, policies and procedures reduce tensions and lower the risk of conflict among sibling partners (Aronoff *et al*., 1997; Gage *et al*., 2004; Gersick *et al*., 1997). In the present study, the factor *Governance* refers to the overall existence of governance structures, policies and procedures in the Sibling Partnership. The following relationships are therefore hypothesised:

H^{7a}: There is a positive relationship between the existence of *Governance* structures and the *Perceived success* of the Sibling Partnership.

H^{7b}: There is a positive relationship between the existence of *Governance* structures and the perceived *Financial performance* of the Sibling Partnership.

H^{7c}: There is a positive relationship between the existence of *Governance* structures and the level of *Family harmony* existing in the Sibling Partnership.

Leadership

A team's leadership is crucial to the effectiveness of the team (Hitt *et al*., 2006; Ivancevich *et al*., 2005). Numerous studies (e.g. Cowie, 2007; Gladstein, 1984; Guzzo and Dickson, 1996; Kozlowski and Ilgen, 2006) have found support for a relationship between leadership and measures of team effectiveness. A Sibling Partnership should allow for shared decision-making and shared accountability, be flexible, and adapt accordingly, be credible and legitimate, and display evidence of servant leadership (Aronoff *et al*., 1997; Gersick *et al*., 1997; Lansberg, 1999). These leadership attributes clearly suggest that for a Sibling Partnership, a participative, referent and expert leadership style should be adopted. Adopting such leadership styles is supported by the findings of Sorenson (2000), who finds a significant correlation between a participative, referent and expert style of leadership in family businesses and teamwork. In addition, Sorenson (2000) finds that participative leadership is significantly and positively associated with financial performance. Sorenson (2000) concludes that referent, and in particular, participative leaders, enable family businesses to obtain desired outcomes for both the business and the family. In the present study, the factor *Leadership* refers to specific leadership attributes being evident in the Sibling Partnership. Leadership attributes may be evident in a single lead sibling or in a specific sibling at a specific time, and for the purpose of this study, *leadership* refers to the person(s) having a consultative or participative leadership style, and having referent and expert leadership. The following relationships are hypothesised:

H^{8a}: There is a positive relationship between the existence of *Leadership* and the *Perceived success* of the Sibling Partnership.

H^{8b}: There is a positive relationship between the existence of *Leadership* and the perceived *Financial performance* of the Sibling Partnership.

H^{8c}: There is a positive relationship between the existence of *Leadership* and the level of *Family harmony* existing in the Sibling Partnership.

The various relationships hypothesised were empirically addressed by means of an empirical study among Sibling Partnerships.

METHODOLOGY

Sampling and Data Collection

Because no complete lists distinguishing family from non-family businesses are at present available in South Africa (Van Der Merwe and Ellis, 2007; Venter, 2003), a convenience snowball sampling technique was employed for this study, and in total 1 323 potential respondents were identified. This sampling technique and methodology is consistent with that of other family business researchers who have been constrained by the lack of a national database on family firms (Sonfield and Lussier, 2004; Van Der Merwe and Ellis, 2007; Venter, 2003).

In the present study the survey technique was employed to collect the raw data on the factors that potentially influence the success of a Sibling Partnership. A self-administered structured questionnaire comprising two sections was distributed to potential respondents. Section 1 consisted of 56 statements (items) relating to various input factors influencing a sibling team. Using a 7-point Likert-type interval scale, respondents were requested to indicate the extent of their agreement with regard to each statement. Demographic information pertaining to both the respondent and the family business was requested in Section 2.

The data collected from 371 usable questionnaires were subjected to various statistical analyses. An exploratory factor analysis was undertaken, and Cronbach-alpha coefficients were calculated to assess the discriminant validity and reliability of the measuring instrument respectively. The relationships proposed in the conceptual model were assessed by means of Structural Equation Modelling (SEM).

Sample Description

The vast majority of respondents were male (80.6%), white (95.4%) and actively employed (93.3%) in the Sibling Partnership. An average age of 40 years was reported, with the majority (72.5%) being younger than 45 years old. Most respondents (36.7%) were an oldest child, with 33.2% being a middle child, and 30.2% a youngest child. Although 29% of sibling teams consisted of both males and females, the majority (64.2%) of teams consisted of males only. The average team consisted of 2.48 siblings, with an average age difference between siblings involved in the business of 5.66 years. On average the siblings had been in business together for 11.44 years, with the majority (56.8%) having been in business together for less than 10 years.

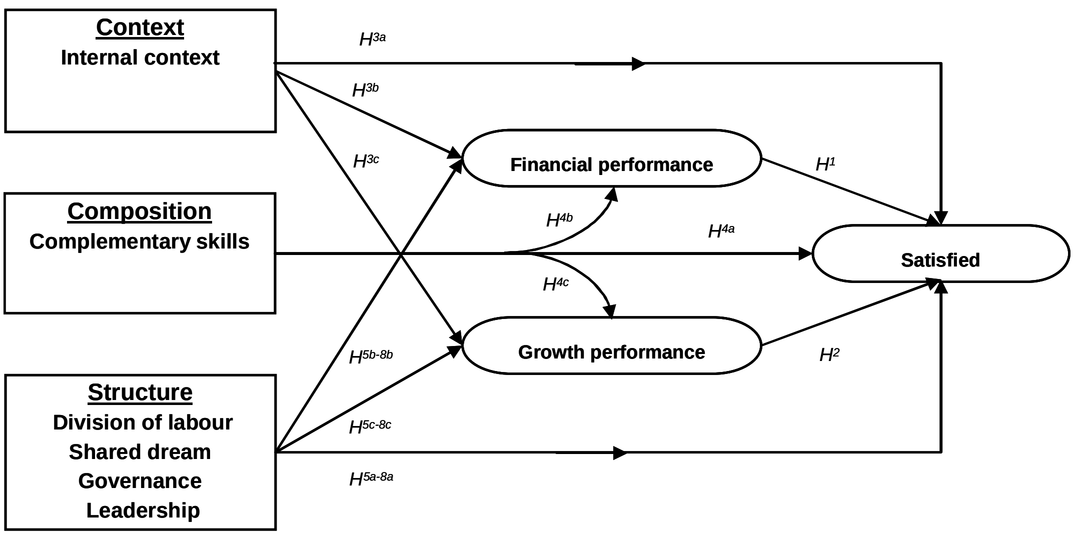
Of the sibling owned/managed businesses participating in the study, 26.7% operated in the agricultural industry, 19.4% in the retail, 15.1% in the manufacturing and 11.3% in the finance/business services industries. The majority (73%) of businesses employed 50 persons or fewer and 24% indicated employment of fewer than 10 employees. Of the participating businesses, 24% indicated having been operating for 10 years or less, whereas quite a large percentage (21%) had been operating for more than 50 years. The oldest business, which had been passed down from one family generation to another, was reported as being 265 years old.

Discriminant Validity and Reliability Results

An exploratory factor analysis was conducted to identify the unique factors present in the data. The software programme SPSS 16 for Windows was used for this purpose. In identifying the factors (constructs) to extract for each model, the percentage of variance explained and the individual factor loadings were considered. The exploratory factor analysis was unable to confirm all the latent variables as originally intended in the conceptual model. The original latent variable *Financial performance* split into two variables, which were subsequently named *Financial performance* and *Growth performance*. The original dependent variable *Perceived success* and the intervening variable *Family harmony* combined to form a new dependent variable. This variable was renamed *Satisfaction with work and family relationships*. The team input factors were all confirmed by the factor analysis. Factor loadings of ≥ 0.4 (Hair, Black, Babin, Anderson and Tatham, 2006) were considered significant, and were reported for all factors, consequently providing evidence of construct and discriminant validity for the measuring instrument. As a result of the exploratory factor analyses, it was deemed necessary to modify the original conceptual model as is illustrated in Figure 2.

FIGURE 2

MODIFIED CONCEPTUAL MODEL: TEAM INPUT FACTORS INFLUENCING THE LEVEL OF SATISFACTION WITH WORK AND FAMILY RELATIONSHIPS IN SIBLING PARTNERSHIPS



* Satisfied = Satisfaction with work and family relationships

The original hypotheses were also reformulated to reflect *Growth performance* as an intervening variable instead of *Family harmony*, as well as *Satisfaction with work and family relationships* instead of *Perceived success* as the dependent variable.

Cronbach-alpha coefficients of greater than 0.70 were reported for all but one construct. *Division of labour* returned a Cronbach-alpha coefficient of 0.644, which is below the lower limit of 0.70 (Nunnally and Bernstein, 1994). This lower limit may, however, be reduced to

0.60 in certain cases (Hair *et al*., 2006; Garson, 2006). The Cronbach-alpha coefficients (see Table 1) consequently suggest that reliable measuring scales were used to measure the constructs under investigation. Table 1 summarises the revised (where necessary) operational definitions of factors as well as details concerning the validity and reliability of the measuring instrument.

TABLE 1

MEASUREMENT INSTRUMENT ANALYSES

Operationalisation of factors	**Items***	**Factor loadings**	**Cronbach-alpha**
Internal context refers to the internal environment or circumstances in which the sibling team finds itself, in terms of access to adequate and suitable resources, information, equipment, employees and working conditions.	6	Max: 0.817 Min: 0.524	0.815
Complementary skills refers to the siblings being *competent* and being competent in different areas, i.e. siblings have strengths in different areas and consequently, their competencies *complement* each other's.	3	Max: 0.842 Min: 0.769	0.799
Division of labour refers to the siblings being assigned a clearly demarcated area of authority and responsibility in their business.	3	Max: 0.764 Min: 0.552	0.644
Shared dream refers to the individual siblings being able to realise their own dreams (goals and ambitions) through their involvement in the Sibling Partnership, and that their involvement in the Sibling Partnership is voluntary.	3	Max: 0.825 Min: 0.682	0.800
Governance refers to the overall existence of governance structures, policies and procedures in the Sibling Partnership.	6	Max: 0.853 Min: 0.647	0.890
Leadership refers to the sibling leader(s) having a participative leadership style, have referent and expert leadership, and being visionary.	5	Max: 0.768 Min: 0.617	0.814
Financial performance refers to the business being financially profitable and secure.	3	Max: 0.917 Min: 0.650	0.877
Growth performance refers to the business showing growth in the number of employees, profits and revenues.	3	Max: 0.933 Min: 0.538	0.781
Satisfaction with work and family relationships refers to harmonious relationships existing among family members (i.e. relationships characterised by closeness, caring and support, appreciation of each other, and concern for each other's welfare) as well the siblings finding their working relationship in the Sibling Partnership as satisfying.	10	Max: 0.904 Min: 0.766	0.961

Structural Equation Modelling Results

Structural Equation Modelling was the main statistical procedure used to test the significance of the relationships hypothesised between the various independent and dependent variables. According to Hair *et al*. (2006), a generally accepted ratio of respondents to parameters in order to minimise problems with deviations from normality, is 15 respondents for each parameter estimated in the model. Based on the ratio of “sample size to number of indicators”, the sample size (371) of the present study was too small to test the model in its entirety. Hair *et al*. (2006) suggest that simpler models (e.g. estimating a single relationship) can be tested with smaller samples. Consequently it was decided to split the original model of input factors influencing the effectiveness of a Sibling Partnership into four submodels and to subject each one individually to a SEM assessment. The software programme LISREL 8.8 (Jöreskog and Sörbom, 2006) was used for this purpose.

The two intervening variables, *Financial performance* and *Growth performance*, and the dependent variable, *Satisfaction with work and family relationships*, constituted the first submodel to be tested using SEM. The input factors were then combined with each one of the three outcome variables mentioned above, resulting in four submodels to be tested using SEM. To establish the extent to which the proposed models (both measurement and structural models) represent an acceptable approximation of the data, various fit indices were considered, namely the Satorra-Bentler scaled Chi-square (χ^2), the normed Chi-square, i.e. the ratio of Chi-square to degrees of freedom (χ^2/df), the Root Mean Square Error of Approximation (RMSEA), and the 90% confidence internal for RMSEA.

With regard to the outcomes model (Table 2), the ratio of χ^2 to degrees of freedom is 2.09, which is slightly higher than the generally acceptable value. Values lower than 2 are indicators of a good fit (Politis, 2003; Hair *et al*., 1998). The RMSEA (0.0543) falls within the reasonable fit range of 0.05 and 0.08 (Grimm and Yarnold, 2000; Hair *et al*., 1998), almost a close fit, while the upper limit of the 90% confidence interval for RMSEA (0.0704) is less than 0.08 (Boshoff, 2005; Roberts, Stephen and Ilardi, 2003). Although the data do not fit the model perfectly, apart from the normed Chi-square (χ^2 / df), the other indices both provide evidence of a model with a reasonable fit.

TABLE 2
GOODNESS-OF-FIT INDICES FOR THE OUTCOMES STRUCTURAL MODEL

Outcomes-based model & dependent variable:	**Satisfied***
Sample size	371
Degrees of freedom	41
Satorra-Bentler scaled Chi-square (χ^2)	85.71; p = 0.000
χ^2 / degrees of freedom	2.09
RMSEA	0.0543
90 % confidence interval for RMSEA	0.0380; 0.0704

* Satisfied = Satisfaction with work and family relationships

The ratios indicating the χ^2 to degrees of freedom for the three other models (Table 3) are lower than the generally accepted 2. Each of the RMSEA indices falls within the close fit range of <0.05, while the upper limits of the 90% confidence internal for RMSEA are all less than 0.08. Athough the data do not fit the models perfectly, the goodness-of-fit indices all provide evidence of models with a close fit.

TABLE 3
GOODNESS-OF-FIT INDICES FOR THE INPUT FACTOR STRUCTURAL MODELS

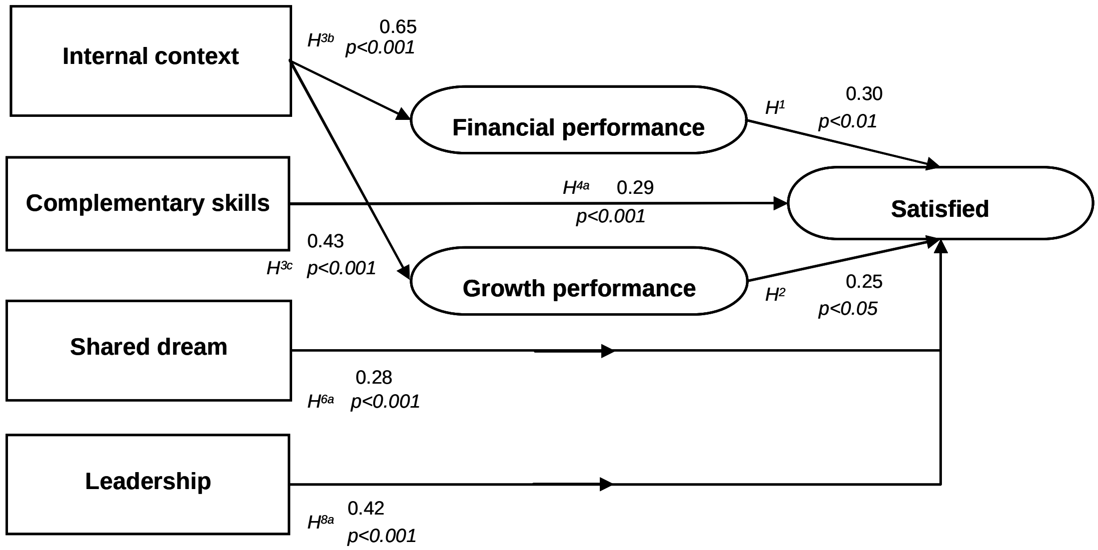
Input factors & dependent variables:	**Finperf***	**Groperf***	**Satisfied***
Sample size	371	371	371
Degrees of freedom	356	356	413
Satorra-Bentler scaled Chi-square (χ^2)	586.34; p = 0.00	613.51;p=0.00	791.39; p = 0.0
χ^2 / degrees of freedom	1.65	1.72	1.92
RMSEA	0.0418	0.0442	0.0498
90 % confidence interval for RMSEA	0.0357; 0.0478	0.0383; 0.0501	0.0445; 0.0550

* Finperf = Financial performance; Groperf = Growth performance; Satisfied = Satisfaction with work and family relationships

SIGNIFICANT RELATIONSHIPS IDENTIFIED BY SEM

Seven significant positive relationships were identified between the various independent and dependent variables. These relationships are summarised in Figure 3. It should be noted that the model was not tested as a single model, but split into four submodels, with each submodel being subjected to SEM. This approach was implemented because the sample size of the present study was too small to subject the model as a whole to SEM.

FIGURE 3
SUMMARY OF SIGNIFICANT RELATIONSHIPS IN THE STRUCTURAL MODELS



* Satisfied = Satisfaction with work and family relationships

The empirical findings of this study show that the *Financial performance* of a family business is positively related (path coefficient = 0.30, $p<0.01$) to *Satisfaction with work and family relationships* (hypothesis H^1). Similarly, the *Growth performance* of the business is positively related (path coefficient = 0.25, $p<0.05$) to *Satisfaction with work and family relationships* (hypothesis H^2). As is evident in Figure 3, a positive relationship exists between *Internal context* and both the *Financial performance* (path coefficient = 0.65, $p<0.001$) of the business (hypothesis H^{3b}), as well as the *Growth performance* (path coefficient = 0.43, $p<0.001$) of the business (hypothesis H^{3c}). The relationship between *Internal context* and *Satisfaction with work and family relationships* (hypothesis H^{3a}) did not prove to be significant in the present study.

The results of this study reveal no empirical support for the hypothesised relationships between *Complementary skills* and *Financial performance* (hypothesis H^{4b}), or between *Complementary skills* and *Growth performance* (hypothesis H^{4c}). However, the empirical results show that a positive relationship (path coefficient = 0.29, $p<0.001$ between *Complementary skills* and *Satisfaction with work and family relationships* (hypothesis H^{4a}) exists.

The hypothesised relationship between *Division of labour* and *Financial performance* (hypothesis H^{5b}) was not confirmed, nor between *Division of labour* and *Growth performance* (hypothesis H^{5c}). Similarly, no relationship was identified between *Division of labour* and *Satisfaction with work and family relationships* (hypothesis H^{5a}).

This study has found empirical support for a positive relationship (path coefficient = 0.28, $p<0.001$) between *Shared dream* and *Satisfaction with work and family relationships* (hypothesis H^{6a}), but not between *Shared dream* and *Financial performance* (hypothesis H^{6b}), nor between *Shared dream* and *Growth performance* (hypothesis H^{6c}).

No support was found for the hypothesised relationship between *Governance* and *Financial performance* (hypothesis H^{7b}), or between *Governance* and *Growth performance* (hypothesis H^{7c}). Similarly, no support was found for the hypothesised relationship between *Governance* and *Satisfaction with work and family relationships* (hypothesis H^{7a}).

As in the case of *Governance*, no empirical support was found for the hypothesised relationships between *Leadership* and *Financial performance* (hypothesis H^{8b}), or between *Leadership* and *Growth performance* (hypothesis H^{8c}) in this study. The empirical results of this study do indicate that there is a positive relationship (path coefficient = 0.42, $p<0.001$) between *Leadership* and *Satisfaction with work and family relationships* (hypothesis H^{8a}).

In summary, the following independent variables were identified as influencing the dependent variables in this study: *Internal context, Complementary skills, Leadership,* and *Shared dream.* In addition, significant relationships were identified between both the *Financial* and *Growth performance* of the business, and the dependent variable *Satisfaction with work and family relationships*. Support was thus found for hypotheses H^1, H^2, H^{3b}, H^{3c}, H^{4a}, H^{6a} and H^{8a}.

CONCLUSIONS AND RECOMMENDATIONS

The results of this study show that both the *Financial performance* and the *Growth performance* of the business exert a significant positive influence on *Satisfaction with work and family relationships*. As predicted, siblings are more likely to be satisfied with their working and family relationships when their business is profitable and financially secure, and displays evidence of growth.

With regard to the determinants of sibling team effectiveness, namely the independent variables, this study supports the suggestion of Stewart (2006) that for different types of teams, the same determinants of effectiveness do not always apply. The empirical findings of this study show that *Internal context, Complementary skills, Shared dream* and *Leadership* are important determinant of sibling team effectiveness, whereas *Division of labour* and *Governance* are not.

The internal environment in which a sibling team finds itself has an important influence on the financial and growth performance of the business. In other words, in order to perform financially and grow, a Sibling Partnership requires an internal organisational context that provides the necessary support to function effectively. In order to create a supportive internal environment, the necessary technology and material resources to complete the task at hand should be available. Appropriate information necessary to make decisions and to complete tasks should be accessible when needed. Provision should also be made for adequate staffing, with suitable skills and values, and in addition, training for both employer (siblings) and employees should be offered. In addition to job-related training, training to develop problem-solving, decision-making, creative thinking and interpersonal skills is also of value.

The extent to which the siblings in a Sibling Partnership possess complementary skills has a significant positive influence on their work and family relationships. When sibling partners appropriately combine their varied knowledge, talents, unique skills and experiences, the resulting synergy raises their overall level of performance, and brings many benefits to the family business. To ensure that these benefits materialise, areas of authority and responsibility should be assigned according to the strengths and particular areas of expertise of each sibling. The existence of complementary skills provides a natural means of dividing responsibilities among the siblings. The challenge, however, is to find the position that best fits the competencies, talents, personality, and style of each sibling, as well as their individual interests and needs. It is also important that each sibling is willing to accept the role for which he or she is best suited, and that the siblings recognise each other’s natural strengths, honour these talents, have no wish to compete in another’s area of competence, and work together to organise their business in such a way that it allows them to harness their natural strengths.

For effective working and family relationships to prevail in a Sibling Partnership, it is important that participation or involvement in the family business by the siblings is voluntary, and that involvement contributes to the realisation of the sibling's personal goals and dreams. In the event that all sibling partners are able to realise their personal dreams through their mutual involvement in the business, one could describe their dreams as being shared. Identifying and focusing on this common ground, keeping the final goal in mind, and understanding what is required to get there, is key to a successful Sibling Partnership. A shared dream should provide direction for the siblings and be focused on something larger than themselves as individuals (e.g. trustees of family legacy and values, stewardship, serving humanity).

The existence and type of leadership has a significant positive influence on the extent to which the siblings are satisfied with their working and family relationships. Specifically, leadership that is participatory, has referent and expert authority, and is visionary, is needed. In jointly managed family businesses, the partners constantly struggle to maintain a balance between family harmony on the one hand, and the need for solid leadership and sensible decision-making on the other. It has been suggested that interpersonal conflict is lowest when there is a strong leader, with each team member retaining some power within a well-defined niche. When siblings work together as a team, it is important that they develop their own leadership and decision-making style which is best suited to their circumstances, which may be very different to that of the controlling-owner generation. In a Sibling Partnership, leadership should be regarded as a comprehensive function that gets the business where it needs to be, and not be about an individual person. The sibling leader should be credible, trusted to make good decisions, and be committed to benefiting the whole family. It is important that agreement and support of the chosen leader should exist.

Successfully managing a Sibling Partnership requires that the sibling partners work together as a team. To assist such family businesses in doing this, several recommendations and suggestions have been put forward in this study. Of particular importance are those recommendations relating to ensuring adequate resources for the business, the existence of a shared dream and complementary skills, and ensuring participatory leadership among the siblings.

IMPLICATIONS FOR THEORY AND RESEARCH

The value of this study lies in the expression “forewarned is forearmed”. Anticipating potential obstacles and challenges allows one to implement steps to address these issues the moment they arise, or potentially to avoid them altogether. Although the factors identified as influencing successful Sibling Partnerships have been shown as important determinants of success within other contexts and fields of study, this study relates them specifically to siblings working together in family businesses. Insights are provided into the conditions that should prevail to improve the chances of a successful working arrangement between brothers and/or sisters. The findings of this study have implications for both succession strategy and planning in family businesses. For example, parents wishing to hand over the family business to more than one of their children, or siblings wanting to go into business together, would do well to ensure that the conditions suggested by this study are in place or at least possible, should they wish a satisfactory outcome.

This study has added to the body of family business research by investigating a particularly limited segment of the literature, namely Sibling Partnerships in family businesses. As such, the study contributes to both theory and practice by focusing on sibling cooperation in partnership rather than on the more common focus of rivalry between siblings. The use of an advanced statistical technique such as Structural Equation Modelling (SEM), as well as a relatively large empirical sample size in this study, also adds to the field of family business which has traditionally been characterised by smaller samples and qualitative research.

This study has integrated many of the traditional theories of teamwork, and has tested these theories among sibling teams in family businesses. By investigating these teams in the context of the family business, the study has also contributed to the fields of Organisational Behaviour and General Psychology by either confirming or refuting many of these theories within a specific context.

LIMITATIONS AND FUTURE RESEARCH

As in all empirical studies, certain limitations are brought to light which should be considered when making interpretations and conclusions with regard to the findings. The use of snowball convenience sampling, which does not always lead to representative samples (Zikmund, 2003: 380), is a limitation of this study. Future research should strive to develop a more comprehensive database from which probability samples can be drawn.

The I-P-O model posits that a variety of inputs combine to influence intra-group processes, which in turn affect team outputs. A limitation of this study is that the proposed conceptual model focuses exclusively on the input variables of the I-P-O model. This study did not investigate the various process factors that potentially influence the successful functioning of a Sibling Partnership. Process variables can also be referred to as “relational-based factors” because they influence the interaction between people when they work together as a team. Relational-based (process) factors include mutual respect and trust, open communication, fairness, and a sibling bond. Future studies should investigate these relational-based factors and incorporate them into a more comprehensive model that describes the factors influencing the successful functioning of Sibling Partnerships. The impact of key stakeholders, such as other family or non-family members, on the ability of siblings to work together in a family business, should also be examined.

As family businesses make up a large percentage of SME worldwide, it could be useful to repeat this study in other countries in an attempt to verify to what extent the factors influencing the success of South African Sibling Partnerships differ from those affecting these partnerships abroad. The question of whether culture influences the success of these family businesses would also be worth pursuing. For the purpose of this study, siblings from small and medium-sized family businesses were selected as respondents. The study could be replicated in South Africa and abroad, but with the focus on other family business teams.

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