The F-PEC Scale of Family Influence: A Proposal for Solving the Family Business Definition Problem

Joseph H. Astrachan, Sabine B. Klein, Kosmas X. Smyrnios

This article proposes an alternative method for assessing the extent of family influence on any enterprise, enabling the measurement of the impact of family on outcomes such as success, failure, strategy, and operations. This proposed method, utilizing a standardized and valid instrument—the F-PEC—enables the assessment of family influence on a continuous scale rather than restrict its use as a categorical (e.g., yes/no) variable. The F-PEC comprises three subscales: power, experience, and culture. This article discusses these scales in detail.

The Definition Problem in Family Business Research

Although in 1989, Handler said that “defining the family firm is the first and most obvious challenge facing family business researchers” (p. 258), more than 10 years later, the challenge remains. To date, there is “no widely accepted definition of a family business” (Littunen, & Hyrsky, 2000, p. 41). Instead, various definitions are reported in the literature.

An analysis of the literature suggests three principal ways in which to consider the plethora of definitions: content, purpose, and form. Most definitions and classifications focus on content (e.g., Handler, 1989; Heck & Scannell, 1999; Litz, 1995). However, definitions cited earlier in the literature mostly concern ownership (e.g., Berry, 1975; Lansberg, Perrow, & Rogolsky, 1988), ownership and management involvement of an owning family (Burch, 1972; Barnes & Hershon, 1976), and generational transfer (Ward, 1987). In contrast, more recent definitions concentrate on family business culture (Litz, 1995; Dreux IV & Brown, 1999).

A definition of family business can either serve a distinct research purpose (e.g., Dean, 1992) or assist in differentiating family from nonfamily firms (Klein, 2000a). Moreover, definitions can be employed for structural purposes, such as subdividing a sample into various categories (Daily & Thompson, 1994). Definitions can also be employed for explanatory purposes. For instance, Harris, Martinez, and Ward (1994) use a multifaceted definition to develop a theory about the evolution of family-owned businesses from founder-managed firms to cousin-run enterprises.

Somewhat problematically, however, a num-
ber of investigators avoid the use of clear definitions, maintaining that classification of family business is done on a case-to-case basis. Lack of definitional clarity can be attributed to difficulties associated with differentiating family from nonfamily enterprises (Wortman, 1995).

Operationalization and specificity of definitions has improved in recent times. However, one concern remains: A definition of family is often missing. This notable absence poses problems, particularly in an international context where families and cultures differ not only across geographical boundaries, but also over time. One way of overcoming this problem, especially in empirical research, is to specify levels and types of relationships as well as kinship ties of involved persons. Another way is to provide from the outset a clear and concise definition of what is meant by family.

Another, though less frequent, concern relates to difficulties associated with categorizing companies that are influenced by two or more unrelated families. For example, two families—Miele and Zinkann, who are descendants of unrelated founders—own and manage Miele in Germany. Although two families influence this company, the influence of one family balances the other. Thus, the influence of multiple-family ownership is not necessarily additive. Given this situation, we suggest in such circumstances that the influence of each family must be considered within any measure that assesses family influence.

To be functional, a definition must be unambiguous and transparent in such a way that it can be quantified. For example, Lea’s (1998) definition is very difficult to operationalize:

A business is a family business when it is an enterprise growing out of the family’s needs, built on the family’s abilities, worked by its hands and minds, and guided by its moral and spiritual values; when it is sustained by the family’s commitment, and passed down to its sons and daughters as a legacy as precious as the family’s name (p. 1).

Furthermore, a definition should measure what it purports to measure and assist in providing reliable (replicable) research results.

In an early attempt to view family businesses as nonmonolithic, Shanker and Astrachan (1996) classify definitions by degree of family involvement. Their three-tier categorization ranges from broad (little direct family involvement), to middle (some family involvement), to narrow (a lot of family involvement). In contrast, Klein (2000b) prepared a modular classification in which different criteria are regarded as independent rather than additive.

Definitions that differ only slightly make it difficult not only to compare across investigations but also to integrate theory. Smyrnios, Tanewski, and Romano (1998) point out that “complexities associated with arriving at a sound definition of a family firm raised a number of methodological concerns related to sampling issues, appropriate group comparisons, and establishing appropriate measures used to derive statistics” (p. 51). This complexity can raise confusion and call into question the credibility of family business research (Habbershon & Williams, 1999). It is our view that a family business definition should be clear about to which dimensions it refers. Moreover, a definition should be transparent and unambiguous. Perhaps most important, a definition should be modular, and its operationalization should lead to reliable and valid results.

A detailed review of definitions employed in studies reveals that there is no clear demarcation between family and nonfamily businesses and that no single definition can capture the distinction between the two types of entities. Artificially dichotomizing family vs. nonfamily firms when no such clear-cut dichotomy exists creates problems than it attempts to solve. In this paper, we propose that there are discrete and particular qualities or characteristics of a business that are more appropriately measured on a continuous rather than dichotomous scale. We also suggest measures that can be used to tap different qualities of businesses. These measures make it possible to differentiate levels of
family involvement. In addition, these measures provide a framework integrating different theoretical and methodological approaches to the study of family business.

**From the One Definition Toward a Continuum of Family Business**

Utilizing the “family universe bull’s-eye,” Shanker and Astrachan (1996) outline a continuum ranging from high to low levels of family involvement. One difficulty associated with this approach is that different aspects of family involvement are directly found on the continuum itself. For example, Shanker and Astrachan suggest that a business with much family involvement has at least one family member in a management position and multiple generations work in and own the company. As this scheme comprises three categories of family involvement, finer distinctions that could be useful in understanding family business behavior appear without recognition.

A relevant issue, therefore, is not whether a business is family or nonfamily, but the extent and manner of family involvement in and influence on the enterprise. In our view, there are three important dimensions of family influence that should be considered: power, experience, and culture. These three dimensions, or subscales, comprise the F-PEC, an index of family influence. This index enables comparisons across businesses concerning levels of family involvement and its effects on performance as well as other business behaviors.

The F-PEC also allows researchers to utilize data derived from subscales and total scores as independent, dependent, mediating, or moderating variables. Interestingly, during the late 1930s, Lazarsfeld (1937, p.127f, quoted after Schnell, Hill & Esser 1995, p.161) identified three reasons for developing a scale: functional reduction, arbitrary numerical reduction, and pragmatic reduction. With respect to the F-PEC, pragmatic reduction is perhaps the most important reason for its development.

As well as pragmatic implications, the F-PEC will herald objectivity and standardization of measurement across investigations. F-PEC development is based on main themes derived from an in-depth content analysis of various definitions of family business. Scales of the F-PEC provide an overall measure of family influence. A discussion of the three subscales of the F-PEC follows.

**Figure 1. Dimensions of the F-PEC Power Subscale**

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<table>
<thead>
<tr>
<th>F-PEC Power Subscale</th>
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<tbody>
<tr>
<td>Ownership</td>
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<tr>
<td>Governance</td>
</tr>
<tr>
<td>Management</td>
</tr>
</tbody>
</table>

Ownership:
- Holding
- Family and nonfamily (external)

Governance:
- Board Members

Management:
- Family and nonfamily (external)
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The Power Dimension of Family Influence: Ownership, Governance, and Management Participation

A family can influence a business via the extent of its ownership, governance, and management involvement (see Figure 1). A measure should not only take these issues into account, but also legal, political, and economic considerations associated with different countries. For example, in the case of board structures and compositions, most western countries, including the United States, involve a one-level board system. Germany, Switzerland, and the Netherlands have a two-level system in which a board member of one board (management or governance) is, by law, not permitted to be a concurrent member of both levels of governance. The F-PEC power subscale takes into account the percentage of family members on each board level as well as the percentage of members who are named through family members on the management and governance boards.

The involvement of family members as leaders of family firms has been a matter of interest for researchers and practitioners since the early 1970s (e.g., Danco, 1975). This interest has focused on a number of different topics, including legitimate leadership (Kehr, 1996), performance (Monsen, 1996), principal-agent theory (Aronoff & Ward, 1995), and governance structure (Neubauer & Lank, 1998). Although these topics are important, the F-PEC is not concerned with whether a nonfamily CEO would serve the business better, whether a family CEO will reduce control costs, or whether a family CEO is highly motivated (Aronoff & Ward, 1995). The F-PEC power subscale assesses the degree of overall influence or power either in the hands of family members or in those named by the family. This level of influence via ownership, management, and governance is, therefore, viewed as interchangeable as well as additive.

In line with this view, Klein (2000a, 2000b) integrates ownership, governance, and management involvement of the family into a definition in which the level of influence in another could balance a lack of influence in one of these three domains. Although the Klein definition provides only a discrete determination (family vs. nonfamily), it does combine several criteria into one continuum and, thus, shows a number of precursor characteristics appropriate for the development of an index or scale. Discussing how this continuum functions, Klein (2000a) states that “influence in a substantial way is considered if the family either owns the complete stock or, if not, the lack of influence in ownership is balanced through either influence through corporate governance or influence through management” (p. 158).

Notwithstanding, Klein did not comment on the importance of indirect influences for international comparisons. This issue is important as tax and legal structures across national boundaries encourage different forms of ownership. In some countries, for example, it is an advantage to own a company through other entities (e.g., trusts, companies, or holding companies), and understanding the actual levels of family ownership and governance control can be difficult to decipher. For instance, it can be difficult to assess the extent of influence of a family who owns a business through a holding company. Faccio and Lang (2000, p. 10) take into account the indirect influence of a stakeholder through “the product of two ownership stakes along the chain” of owning companies or family members. An example of this ownership chain includes a family that owns 100% of a holding company that itself owns 100% of the company. Obviously, this family has 100% influence through ownership. However, a family that owns 50% of a holding company that itself owns 50% of the stock of a company has only a 25% influence via ownership.

Family influence through governance and management can be measured as the proportion of family representatives who are members of the governance or management boards. In contrast, indirect influence might mean members of a board who are named through family members but are not family members themselves. A family’s influence through this means, although indirect,
is usually considerable. To assess this direct influence optimally, a weighting system must be employed. In mixed cases, the proportion of family members on the board will be added to a weighted proportion of members.

Consider the following example: two of five board members are family, two are nominated or elected by family members, and one is representative of a minor nonfamily shareholder. Our weighting system suggests that this board comprises 44% of family influence to the overall power subscale. This proportion is calculated by aggregating 40% of family influence (i.e., two of five members are family) and 4% of indirect influence (two of five multiplied by 0.1).

The Experience Dimension of Family Influence: Generation in Charge

This section discusses the family business experience subscale in relation to succession and the number of family members who contribute to the business. A number of authors (e.g., Barach & Ganitsky, 1995; Birley, 1986; Heck et al., 1999; Ward, 1987, 1988) state that an enterprise can be viewed only as a family business when a transfer to the next generation is intended. Other authors (e.g., Daily & Thompson, 1994) consider that at least one generational transfer should have occurred. For others (e.g., Klein, 2000b), a founder-run entity can be regarded as a specific case of a family business. Despite these differences in viewpoints, all authors agree that each succession adds considerable valuable business experience to the family and the company.

It could be argued that the level of experiences gained from the succession process is greatest during the shift from first to second generations. During the first generation of ownership, many new rituals are installed. Thus, second and subsequent generations of ownership contribute proportionally less value to this process. As shown in Figure 2, family business experience of succession is regarded as involving an exponential continuum. Accordingly, dimensions involving a generation of family ownership and who is on the management and governance boards are weighted according to a nonlinear algorithm.

The number of family members associated with the business also contributes to the experience dimension. As a case in point, the wife of the family CEO can influence the business in a substantial way. Posa and Messer (2001) state that “CEO spouses play a key, even if often invisible, role in most family-controlled corporations.”

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**Figure 2. The Experience of Succession Curve**

<table>
<thead>
<tr>
<th>Generation</th>
<th>Value of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st generation</td>
<td>0%</td>
</tr>
<tr>
<td>2nd generation</td>
<td>20%</td>
</tr>
<tr>
<td>3rd generation</td>
<td>40%</td>
</tr>
<tr>
<td>4th generation</td>
<td>60%</td>
</tr>
<tr>
<td>5th generation</td>
<td>80%</td>
</tr>
<tr>
<td>6th generation</td>
<td>100%</td>
</tr>
</tbody>
</table>

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Furthermore, discussions between owner-parents and their young adult children on business topics can enrich the business in a substantial way.

In some families, the contribution of the young generation over time is even more visible. One example is the Schmidt family in Germany. The youngest son of the Schmidt family, which owns and manages a bank in Southern Germany, in 1994 founded Consors—a subsidiary dealing with online brokerage. Today, Consors is one of the biggest online banks in Europe and has been listed on the Frankfurt stock exchange since 1999. The contribution of the son to the family business by founding his own business as a start-up in a similar field is undeniable, even given the recent difficulties facing the Schmidt bank itself and, therefore, Consors as well. The family gained substantial experience as a result of their son’s entrepreneurial input. Therefore, the number of family members dedicated to the business is viewed as an important indicator of how much experience the business receives from the family. Figure 3 shows the dimensions of the F-PEC experience subscale.

The Culture Dimension of Family Business: Family and Business Values

Gallo (2000) considers business culture an important family enterprise element. According to his perspective, a firm can be considered a family business when family and business share assumptions and values. Other researchers define a family firm in terms of how the CEO, its managers, or its owners view the business. For example, it is reasonable to assume that owners or managers who regard their enterprise as a family business are highly likely to be attentive to issues and opinions of family members, as well as meeting the needs of family members.

However, anchoring values in an organization takes time. Klein (1991) finds that core values of key personnel (i.e., individuals who have led an organization for more than 10 years) usually form part of the culture of their organization. The values of these significant individuals can be seen embedded in internal political matters, the ways in which conflicts are handled, and the degree of centralization vs. decentralization. Notwithstanding, evaluating overlap of company and family values can be difficult, as issues pertaining to definition and time need to be considered. For example, the values of an organization might well be rooted in family values of a former generation, but not necessarily manifest in the current family.

The F-PEC assesses the extent to which family and business values overlap, as well as the family’s commitment to the business. According to Carlock and Ward (2001), “the family’s commitment and vision of itself are shaped by what the family holds as important … For these rea-
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Figure 4. Dimensions of the F-PEC Culture Subscale

<table>
<thead>
<tr>
<th>F-PEC Culture subscale</th>
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<tbody>
<tr>
<td>Overlap between family values and business values</td>
</tr>
<tr>
<td>Family business commitment</td>
</tr>
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</table>

The F-PEC Scale

As discussed earlier, the F-PEC comprises three subscales: power, experience, and culture. The F-PEC measures the extent of family influence on any enterprise. In marked contrast to previous work in this field, the F-PEC is not concerned with arriving at a precise or all-encompassing definition of family business or with differentiating this type of enterprise from its counterparts. However, development of a standardized instrument, like the F-PEC, enables sound comparisons across investigations and use of measures of family influence as either dependent, independent, moderating, or mediating variables. Figure 5 shows subscales along with their dimensions making up the F-PEC scale.

Procedures for Determining the Psychometric Properties of the F-PEC Scale. A team of experts, including academic researchers, family business owners, and practitioners, developed all items forming part of the F-PEC. Development of the scale proceeded through focus group discussions and pilot testing on a number of family business owners. Data relating to the F-PEC were analyzed utilizing principal components and maximum likelihood factor analytic procedures and structural equation modeling techniques. Items demonstrating ambiguity, redundancy, and lack of discriminatory power were eliminated.

Dimensions of the F-PEC Measure. Following suggestions by Gorsuch (1983), McDonald (1985), and Pedhazur and Pedhazur Schmelkin (1991), both factor analytic methods were used to assess the stability, number, and simplicity of factor structures. A cutoff score of $r = .40$ was considered reasonable for inclusion of a variable in interpretation of a factor (Stevens, 1986; Lambert, Wildt, & Durand, 1991). Items that did not meet the above-mentioned item loading criterion and those items that lacked discriminatory power were deleted.

Psychometric Properties. Internal reliability (consistency) coefficients (Cronbach’s alpha) for the F-PEC subscales and overall scale were also determined. Cronbach’s alpha assessed the degree to which items making up a factor are intercorrelated or share similarities in their measurement of a particular construct, such as culture.
Items that make up the three subscales of the index were then evaluated for unidimensionality and reliability. A unidimensional factor comprises items that share a similar trait or construct. Congeneric measurement models were produced by allowing each item to respond to its underlying concept (Jöreskog & Sörbom, 1989). Goodness of fit of a measure was used to assess the degree to which observed data scores are predicted by an estimated model. Results should indicate whether items adequately fit hypothesized models and whether items have acceptable reliabilities (Hair, Anderson, Tatham, & Black, 1995).

**External Validity.** To demonstrate external validity (i.e., generalizability), the F-PEC was tested on large sample groups (e.g., $n > 500$) in different countries, including the United States, Germany, Australia, and Britain as well as in Europe. Cross-cultural comparisons also involved subjecting the F-PEC to the rigorous statistical procedures outlined previously.

**Discussion**

The F-PEC index of family influence on the business provides researchers, for the first time, with a tested standardized instrument that allows integration of different theoretical positions as well as comparisons of different types of data. Once the F-PEC’s reliability and validity are demonstrated, it will encourage researchers to conduct more international research on a solid...
basis, as well as encourage researchers from outside the family business field to include family business issues in their research. The time so far spent on definition problems might be invested in either pure research of fundamental questions to develop a theoretical framework of family businesses and/or in empirical studies—both cross-national and an in-depth understanding of special items. In the long run, international studies might lead to a better understanding of national peculiarity, thereby enriching the discussion of researchers, consultants, and family business members so that they can learn from each other and from other nationalities.

We also hope that practitioners will regain trust in research results, which might help encourage and finance further research. Questions concerning family businesses that consultants, family business members, and companies dealing with family businesses raise could lead to direct projects that don’t depend on first having to define family business. At the same time, it would be possible to compare the obtained data with already-existing data that were gained on the same basis.

Apart from research implications, the F-PEC will help teachers and scholars of the family business field to understand the possible ways through which family members and families as an entity gain, loose, or maintain influence on their business. This will help in the development of agendas for both university courses and executive courses, emphasizing the management of this family influence on the business in a way that balances family and business needs. Such knowledge helps both the family and the business to perform even better.

We believe that the F-PEC is only the beginning and will help to establish the family business as an independent research field attracting high-standard researchers and dedicated practitioners.

References
Gallo, M. A. (2000). Conversation with S. Klein at the IFERA meeting held at Amsterdam University, April 2000.


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Appendix. F-PEC Questionnaire

Definitions

• Family is defined as a group of persons including those who are either offspring of a couple (no matter what generation) and their in-laws as well as their legally adopted children.

• Ownership means ownership of stock or company capital. When the percentage of voting rights differs from percentage of ownership, please indicate voting rights.

• Management board refers to the company board that manages or runs an entity(ies).

• Persons named through family members represent the ideas, goals, and values of the family.

Part 1: The Power Subscale

1. Please indicate the proportion of share ownership held by family and nonfamily members:

   (a) Family ________%
   (b) Nonfamily ________%

2. Are shares held in a holding company or similar entity (e.g., trust)?  1. □ Yes  2. □ No

   If YES, please indicate the proportion of ownership:

   (a) Main company owned by:

       (i) direct family ownership: ________%

       (ii) direct nonfamily: ________

       (iii) holding company: ________%

   (b) Holding company owned by:

       (i) family ownership: ________%

       (ii) nonfamily ownership: ________%

       (iii) 2nd holding company: ________%

   (c) 2nd holding company owned by:

       (i) ________ family ownership: ________%
3. Does the business have a governance board?  1. ☐ Yes  2. ☐ No
   
   If YES:
   (a) How many board members does it comprise?  ________ members
   (b) How many board members are family?  _ _______ family members
   (c) How many nonfamily (external) members nominated by the family are on the board?  ________ nonfamily members

4. Does the business have a management board?  1. ☐ Yes  2. ☐ No
   
   If YES:
   (a) How many persons does it comprise?  ________ members
   (b) How many management board members are family?  ________ family members
   (c) How many nonfamily board members are chosen through them?  ________ nonfamily member
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Definitions

• The founding generation is viewed as the 1st generation
• Active family members involve those family members who contribute substantially to the business. These individuals might hold official positions in the business as shareholders, board members or employees.

Part 2: The Experience Subscale

1. What generation owns the company? _____________ generation
2. What generation(s) manage(s) the company? _____________ generation
3. What generation is active on the governance board? _____________ generation
4. How many family members participate actively in the business? _____________ members
5. How many family members do not participate actively in the business but are interested? _____________ members
6. How many family members are not (yet) interested at all? _____________ members

Part 3: The Culture Subscale

Please rate the extent to which

1. Your family has influence on your business.
2. Your family members share similar values.
3. Your family and business share similar values.

Please rate the extent to which you agree with the following statements:

4. Our family members are willing to put in a great deal of effort beyond that normally expected in order to help the family business be successful.
5. We support the family business in discussions with friends, employees, and other family members.
6. We feel loyalty to the family business.
7. We find that our values are compatible with those of the business.
8. We are proud to tell others that we are part of the family business.

Not at all To a large extent
1........2........3........4........5
Not at all To a large extent
1........2........3........4........5
Not at all To a large extent
1........2........3........4........5
Not at all To a large extent
1........2........3........4........5

Strongly Disagree Strongly Agree
1........2........3........4........5
Strongly Disagree Strongly Agree
1........2........3........4........5
Strongly Disagree Strongly Agree
1........2........3........4........5
Strongly Disagree Strongly Agree
1........2........3........4........5
9. There is so much to be gained by participating with the family business on a long-term basis.  

10. We agree with the family business goals, plans and policies.  

11. We really care about the fate of the family business.  

12. Deciding to be involved with the family business has a positive influence on my life.  

13. I understand and support my family’s decisions regarding the future of the family business.  

Strongly Disagree  Strongly Agree  
1…………2…………3…………4………..5  

We thank you very much for your support!