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Family human capital and the championing of innovation in small firms

Richard Gottschall[1], Jeremy A. Woods[2]

[1]*SUNY Plattsburgh, 218 Ausable Hall, 101 Broad Street, Plattsburgh, NY 12901, USA, gottscrl@plattsburgh.edu*
[2]*California State University, Bakersfield, Office: BDC 136A, 9001 Stockdale Highway, Bakersfield, CA 93311-1022, USA, jwoods7@csub.edu*

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ABSTRACT

This study of 94 small family firms focuses on complex interactions between individual family members and firm-level activities and outcomes. We develop and test a model of relationships between family championing of innovation, family human capital characteristics, and the firms' adoption of innovation. Family members championed many more adoptions of innovation than non-family members did, demonstrating strong family influence in smaller firms. An important point is that this strong family influence would appear insignificant without accounting for the significant moderating influence of variance in family human capital levels. This study contributes to our understanding of family influence's heterogeneous nature by modeling interaction between mediating family behaviors and moderating family characteristics

Introduction

While the influence of family ownership and control is widespread and self-evidently strong in small firms (Astrachan & Shanker, 2003), the effects are as diverse and rich as family life itself. Studies repeatedly find that family influence has such varied impacts on standard measures of firm behavior or performance that they are, in this sense, indistinguishable from nonfamily firms (O'Boyle et al., 2012). Some suggest that it is important to find a link between family influence and firm behavior that distinguishes family from nonfamily firms (Chua et al., 2012). The complex overlap of family and firm institutions has many researchers looking for mediators and moderators of family influence that help explain the heterogeneity of family firm behaviors and performance (Gedajlovic et al., 2012).

This article examines the championing of innovation in small family firms and tests the potential of family human capital to moderate rates of innovation adoption. This approach responds to calls to fill multiple knowledge-gaps in the literature with regard to: the multileveled-nature of the family firm (Déniz-Déniz et al., 2018; Eddleston et al., 2008), mediating and moderating variables (Gedajlovic et al., 2012), and individual family members' characteristics and influence (Chirico & Salvato, 2014; Stewart & Hitt, 2012). Using existing constructs and relationships from the human capital and innovation literatures, we chose two related questions in the family firm context: Do family or nonfamily members champion more of the organization's innovation adoptions? And, does family members' human capital moderate the relationship between family championing and levels of organizational innovation?

We follow on the proposition that differences in family firms may be related to differences in individual family members' influence (Lumpkin et al., 2008). We conceive of family-level influence as being comprised of individual family members' characteristics and behaviors that would, in aggregate, impact firm-level outcomes. While there are many potential aspects of family member involvement that could influence the firm, we chose the constructs of championing of innovation, family human capital, and organizational innovation for their multi-level natures.

Literature Review

Human capital is an excellent construct for bridging in-

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dividual, family, and firm concerns in the multilevel family business system (Boxall, 2011). The "strength" of both families and firms depends largely on the human capital of their members (Becker, 1991; Dawson, 2012; Grant, 1996). The principle idea of human capital theory is that early investments in human capabilities can be repaid by future gains in productivity (Schultz, 1961). The family firm provides family members with both an environment for learning and for applying knowledge - both sides of the human capital equation (Chirico & Salvato, 2008). The employment of a family member impacts the family member's career, family dynamics, and firm operations; these are three important issues for families that own and control businesses (Chrisman et al., 2012). Family human capital concerns affect many important decisions in a small family firm.

The championing of innovation is an individual behavior that anyone can engage in, regardless of rank, title, or family status, and it impacts important firm-level activities and outcomes (Howell & Higgins, 1990). The central idea of a Champion of Innovation is in uncertain situations, an individual persuades the organization to take risk by assuming personal and professional responsibility for success (Burgelman, 1983). While there is empirical evidence documenting the role of Champions in organizational innovation processes, to our knowledge, it has not been studied in the context of the family firm. We examine championing because multiple family members could potentially influence the firm in this manner, but also may not, if nonfamily members more often play the role of champion.

We chose the adoption of innovation as the reference variable because it is a multilevel phenomenon, driven by individual employees, that ultimately affects the interface between the firm and its market (Kimberly & Evanisko, 1981; McDowell et al., 2018). In small family firms, the adoption of innovation often refers to the incorporation new technology, materials, products, management ideas, suppliers, and/or customer-types in their business operations (Rosenbusch et al., 2011). The focal point of organizational innovation in this study is the firm's strategic adaptation to changing market conditions. While it is difficult to measure innovation at the market level (how new is it to the market/world?) it is easier at the organizational level (is this new to our organization?) (Crossan & Apaydin, 2010). For the purposes at hand, we conceive of the adoption of innovation in the small family firm as a firm-level strategic orientation similar to conceptions of Entrepreneurial Orientation (Zahra, 2005).

In a sample of 94 family firms with fewer than 200 employees, we find significant differences in the number of innovations championed by family and non-family members. Family members exercise considerable individual influence on the firm's adoption of innovation. We also find significant relationships between family champions' human capital (measured by education and experience) and organizational innovation. These findings suggest how individual family members' characteristics and behaviors influence family firms and help generate heterogeneity in firm-level activities and outcomes.

Adoption of Innovation in Family Firms

In small family firms, the adoption of innovation strategically positions the firm in the market (Ahluwalia et al., 2017; Hayton et al., 2008). The term, *innovation*, captures a broad range of activities and outcomes (Crossan & Apaydin, 2010). A very few firms generate disruptive, new-to-the-world offerings, while most adopt new-to-their-firm products, services, methods and practices in order to keep up to date in the marketplace (Tushman & Anderson, 1986). In practice, impetus to adopt innovations might arise internally in the organization or externally (Barwinski et al., 2020), when working with existing or new suppliers, while monitoring competitors' activities, and when working with their existing or new customers (von Hippel, 1986). Keeping up with all the possibilities for change can be a challenge, even when innovations have been proven in the marketplace.

Research on innovation in family firms is growing rapidly, but insights and conclusions remain tentative and primarily focused on comparisons with nonfamily firms (De Massis et al., 2012; Filser et al., 2016). Compared to nonfamily firms, family firms may have weaknesses and strengths when it comes to innovation capabilities (De Massis et al., 2015). It may be that a more conservative approach to innovation, that might be common in family firms, results in delayed or missed adoptions, but once begun, improves execution and increases commitment to success (König et al., 2012). Additional evidence suggests that family firms out innovate nonfamily firms after adjusting for investment levels (Duran et al., 2016) and that family firms are more innovative than nonfamily firms when responding to stakeholder concerns (Craig & Moores, 2006). These perspectives are primarily rooted in a long-term, conservative, risk averse orientation that might by typical in family-governed firms and yet less detrimental to innovation levels than is commonly expected.

Family Member Involvement and Family Influence

For all the considerable power of the family institution (Becker, 1991), researchers find that family member involvement does not necessarily influence firm performance (Chua et al., 1999; O'Boyle Jr. et al., 2012). In smaller firms,

ownership, control, and employment are usually limited to a very few family members (Chua et al., 1999), which greatly constrains the quantitative variability and statistical interest of these measures. To address this problem, researchers have created a variety of family-level constructs that might serve to distinguish family from nonfamily firms (Chua et al., 2012; Diéguez-Soto et al., 2015). For example, nepotistic behaviors common in family firms may reflect families' noneconomic-familial concerns (Berrone et al., 2012; Chua et al., 2003).

Researchers are developing a more comprehensive conceptualization of the involvement-influence overlap. The F-PEC scale uses nine items to assess family influence in three dimensions: family power (ownership and board representation), family experience (number and generational status of active family members) and family culture (shared values and commitment) (Astrachan et al., 2002). The more recent FIFS scale uses 20 items to assess 6 dimensions of family influence, including: ownership and control, proficiency level of active family members, sharing of information between active family members, transgenerational orientation, family-employee bond, and family business identity (Frank et al., 2017). These scales attempt to capture a variety of involvement and influence dimensions that in different combinations can produce qualitative differences and better explain family firm heterogeneity.

Family influence is primarily conceptualized as a family-level construct, such as a common concern for transgenerational ownership (Chua et al., 1999), a shared long-term orientation (Le Breton-Miller & Miller, 2006), collective claims on resources (Schulze et al., 2003), or communal feelings and bonds (Litz, 1995). These group-level constructs, as well as the F-PEC and FIFS scales, are predicated on individual family member characteristics and behaviors (Eddleston et al., 2008). Furthermore, we note that the considerable attention paid to succession in family firms is largely about individual family members (Molly et al., 2010). Finally, Carney's (2005) description of family influence as parsimonious, personal, and particularistic describes a unity of command that is difficult to imagine as pluralistic.

A Model of Family Employee Influence on the Firm

In the model presented below (Figure 1), relationships between individual variables, family variables, and firm variables are depicted. Family-level constructs are composed of individual family member characteristics and behaviors (arrows marked B) (Déniz-Déniz et al., 2018). The addition or subtraction of a family employee directly affects family-level human capital and may affect family-levels of championing. Given insignificant relationships between family employment levels and firm-level outcomes (arrow

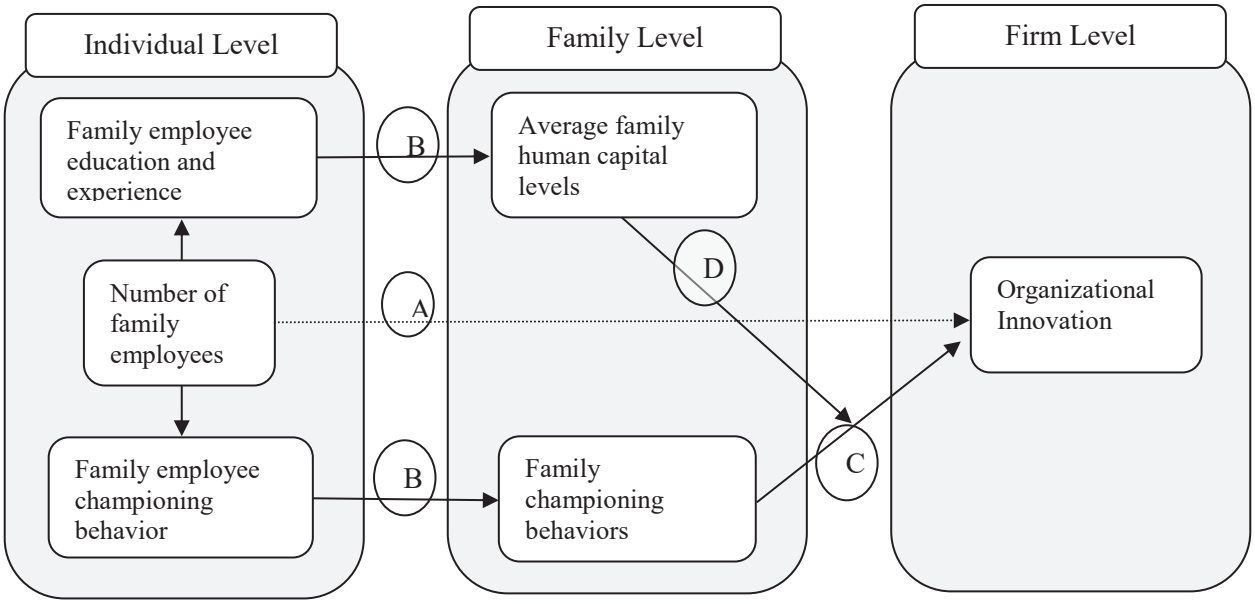

Figure 1. A Model of Individual Family Employee Influence on the Firm

A), this model explores both mediating influential activities (arrow C) and characteristics that might moderate family influence (arrow D).

Who Champions Innovations in Family Firms?

The adoption of an innovation is an important firm-level decision that is often championed by a single individual. Business organizations are complex, comprised of many activities and processes that must be coordinated (Alchian & Demsetz, 1972). An experienced and creative individual may identify an opportunity for improvement in their area that would require changes in other parts of the organization (Howell & Boies, 2004). The initial challenge is that no single individual possesses the expertise to evaluate a potential innovation's impacts on the organization's complex system of activities and processes (Burgelman, 1983). In discussing the potential positive and negative impacts of the adoption with other stakeholders, the champion's personal and professional opinions become central in the firm's decision making process. Importantly for this study, is that either a family or nonfamily employee could potentially play the influential role of champion.

Some researchers suggest that family members might be more likely champions of innovation. In a case study of the famous, musical family, the Brubeks (Litz & Kleysen, 2001), the activities and processes of intentionally sharing in creative pleasures and innovating together are described in a family setting. The Brubecks' focus on family inclusion and their ability to transfer creative abilities provide powerful examples of how effective families can be in fostering innovation. Another interesting study of ten "German Dynasties" (firms more than 100 years old) found that the families delegated lesser adoption decisions to nonfamily managers but were directly involved in more consequential adoptions (Bergfeld & Weber, 2008). Still other authors have identified knowledge sharing among individual family members as a means of individually influencing innovation activities (Chirico, 2008; Chirico & Salvato, 2008, 2014). Taken together, we may find that family members exercise disproportionate influence on more consequential adoptions in smaller family firms.

On the other hand, when considering the importance of knowledge and expertise in the adoption process (Galunic & Rodan, 1998), there are also good reasons for nonfamily employees to play the role of champion. The German dynasties discussed above delegated smaller innovation decisions to nonfamily employees. In most cases, nonfamily employees will greatly outnumber family employees and are a more abundant source of potential champions (Barnett & Kellermanns, 2006). Nonfamily members offer a potentially greater wealth of knowledge and different perspectives that are essential for more transformational innovations (Dyer, 1989). The informal nature of the championing role allows nonfamily members to make important contributions without necessarily compromising family control of the firm. Family firms that can effectively leverage the knowledge and abilities of nonfamily employees will have greater capacity for organizational innovation.

It stands to reason that good ideas can come from anyone in the organization and that the economic rationale for adapting to market conditions would result in both family and nonfamily members championing innovation. However, in smaller family firms (the focus of our study), the literature seems to indicate that family members may be more likely champions of important innovations. On these grounds, we hypothesize that individual family members will carry outsized influence on the firm through their championing of innovation.

Hypothesis 1. In small family firms, family employees will champion more adoptions of innovation than the non-family employees.

Heterogeneous Family Influence and Human Capital Resources

Due to the heterogeneous nature of family influence it is uncertain if family influence via championing would produce any outcomes general to family firms. We suspect not, and therefore identified family human capital as a possible moderator of family championing influence. By exploring a link between firm activities (adoptions) and family human capital, we rely on a resource-based view of the family firm and use one of the most unique family firm resources (Sirmon & Hitt, 2003).

We define family human capital as an aggregation of individual family members' knowledge, skills, and abilities made available to the firm (Danes et al., 2009). The strategic human resource management literature addresses the challenges of aggregating human capital in theory and in practice (Boxall, 2011). At the firm-level, we understand that a more knowledgeable family might direct the firm differently than a family with less collective knowledge. Likewise, an individual family member who is high in knowledge might contribute more knowledge to the firm than a less knowledgeable family member. However, people don't always work well together and predicting group performance is challenging. Moreover, it is problematic to compare a family firm with three high school graduates (36 years of education in aggregate) to a firm with two college graduates (32 years of education). Depending upon the business situa-

tion, either two college or three high school graduates might be a more desirable combination.

The proposition that family influence may be moderated by family human capital levels is made in many important papers in the family business literature (Danes et al., 2009; Habbershon & Williams, 1999; Hoffman et al., 2006; Sirmon & Hitt, 2003), yet remains largely unexplored (Chirico, 2008; Mahto et al., 2018). Reactions to this research at conference presentations have echoed concerns that family human capital may be of insufficient power to moderate influence (Sirmon & Hitt, 2003). Family sizes and family involvement are so limited that overreliance on family human capital would strongly constrain firm behavior (Carney, 1998). This type of resource constraint may be undesirable, but that does not mean it is not the case in many, primarily smaller, family firms. Family human capital constraints may be eased by increasing family education levels and useful experiences, and by leveraging family with nonfamily human capital (Verbeke & Kano, 2012).

A primary insight on family human capital is its stronger link to the firm than is found with nonfamily human capital (Dawson, 2012; Gomez-Mejia et al., 2001). Family members have generally longer tenures than nonfamily members (Miller & Le Breton-Miller, 2006). This is a nontrivial phenomenon in economic, organizational, and strategic thinking (Williamson, 1991). Family firm or not, organizations strategize around their resources, some of which are clearly more important than others (Lepak & Snell, 2002). Longevity imbues family human capital with asset specificity, a resource that is specific to the firm's unique strategy, as opposed to other resources that may be necessary for production but are more generic and easily replaced (Gedajlovic & Carney, 2010). Concerning innovation, the continued involvement of family human capital may be a strategic-given, a resource to be worked with or around, and influential in either case.

The literature linking human capital and innovation provides useful insights for application in the family firm context. Categorizing knowledge as being either general, widely applicable, or specific and useful for a given purpose or setting is important for innovation and for family firms (Becker, 1962; Dakhli & De Clercq, 2004). General knowledge is associated with comprehending newer or foreign ideas that enable more innovative adoptions. Conversely, more specific knowledge related to an internal organizational process more often leads to incremental innovation adoptions. The family firm might gain more general knowledge by sending family members to school and/or hiring educated and/or externally trained nonfamily members. Specific knowledge is primarily gained by working in the family firm and having access to top managers at family gatherings. The family firm offers unique opportunities for family human capital development. In theory, nonfamily employees have greater general human capital potential while family members have unique opportunities for specific human capital development.

The human capital and innovation literatures support the hypotheses that general human capital can fuel higher levels of organizational innovation than specific human capital (Burt, 1992; Granovetter, 1973; Marvel & Lumpkin, 2007; Rauch & Rijsdijk, 2011). Again, this is not to imply that more organizational innovation is better than less. The purpose of examining the generality or specificity of family human capital is for better understanding the moderation of family influence. We surmise that the family influence of championing might be indistinguishable at the firm level without accounting for some moderating force. In particular, we hypothesize that increases in general family human capital will positively moderate the relationship between family championing and organizational innovation while increases in specific human capital will negatively moderate the relationship.

Hypothesis 2. Increased experience working in the family firm will negatively moderate the relationship between family championing and the adoption of innovation.

Hypothesis 3. Increased formal education will positively moderate the relationship between family championing and the adoption of innovation.

Research Design

Data collection on family human capital and championing behaviors in small, family firms is challenging (Beck et al., 2011; Chua et al., 1999). Therefore, a survey was designed according to principles and tips from Dillman (2000) and Van Selm and Jankowski (2006) using well-established scales and variables (Davidsson, 2005). Precautions in sequencing related variables (Spector, 2006) and the collection of a second response from 12 firms (11.7% of the sample) (cf. Miller et al., 2008; 2009) were undertaken to control and assess possible common method variance problems.

Sample Data Collection

Surveys were disseminated by three different methods. Snowball-sampling techniques, used for hard-to-reach-populations (see Biernacki & Waldorf (1981)), were employed in asking 36 associates to respond to the survey and/or pass it on to other small business-owners. And an additional 6,934

surveys were emailed to addresses found on eight Chamber of Commerce websites and a list of *Owners, Presidents*, and *Partners f*rom Email-list.com. Response rates were approximately 50% for snowball-sampling, 9% from the Chamber of Commerce websites, and .082% from E-mail-list.com. Out of 241 complete responses, 94 (39%) met the criteria of employing at least two family members full- or part-time and at least one non-family member. All the selected respondents (94) self-identified as family members. This sample of 94 family firms has a mean age of 24.04 years and employs an average of 25.85 people. Independent samples t-tests showed no evidence of geographic or non-response biases. Analysis of 12 paired-responses showed acceptable levels (> .7) of inter-rater agreement and reliability (Nunnally, 1978).

Operationalization of Constructs

To measure championing of innovation, respondents were asked to identify the firms' top three "most-important" innovations in the last eighteen months by type: (1) new products, (2) new services, (3) new methods of production, (4) opening new markets, (5) new sources of supply, and (6) new ways of organizing. After identifying a specific most-important innovation, the respondent was asked: "Who, in your organization, was responsible for identifying and leading the adoption of this innovation?" This method of identifying champions is reported as "a highly reliable and valid technique" (Howell & Higgins, 1990, p. 326). This measure will result in a variable ranging from 0/3 to 3/3 for family and non-family members.

Family human capital is commonly measured by levels of education and experience. Firm-specific family human capital was measured by how many years each family employee has worked in the family firm. General human capital was measured by highest degree obtained by each family employee (cf. Bates, 1990; Becker, 1962; Blaug, 1976; Davidsson & Honig, 2003). The choices are: (1) high school, (2) two-year college, (3) four-year college, (4) Master's degree, (5) Ph.D., (6) technical certification (7) did not finish high school, (8) don't know/recall. This measure results in a variable for the average number of tertiary degrees obtained (beyond a high school diploma).

Organizational innovation was measured using a scale developed by Johannessen et al. (2001) that measures respondents' perceptions of the level of adoption of: (1) new products, (2) new services, (3) new methods of production, (4) opening new markets, (5) new sources of supply, and (6) new ways of organizing. Respondents ranked their firms' level of activity for each type of innovation on a five-point Likert scale, from "Not active" to "Extremely active." These six measures converge to produce a single measure of innovation based on the introduction of "newness" to the organization (Johannessen et al., 2001), and reflect an encompassing measure of the family firm's total level of innovation over the last 18 months.

Control variables were selected from the innovation literature (Kimberly & Evanisko, 1981). Organizational size is related to innovation by economies of scale and the ability to spread the costs of innovation over a greater resource base (Chrisman et al., 2003). Organization age may be associated with structural inertia, which may limit organizational innovation (Hannan & Freeman, 1984). Organizational climate for innovation consists of organizational culture, resources, and reward systems that are favorable for innovation (Amabile et al., 1996; Kimberly & Evanisko, 1981). A four-item scale was developed to measure organizational atmosphere for innovation based on the seven-item-scale of Madjar et al. (2002). For example, "My supervisor discusses with me my work-related ideas in order to improve them" was translated as, "Organizational members regularly discuss work-related ideas in order to improve them." Respondents rated four such statements on a five-point scale from "strongly disagree" to "strongly agree."

Industry Dynamism and Industry Classification: A firm's market environment affects its level of innovation (Drazin et al.,, 1999; Kimberly & Evanisko, 1981). Zahra et al., (2004) assess the environment with a single, self-reported item, identifying the industry as "high tech" or "low tech." Eddleston et al. (2008) use four self-reported measures concerning the abundance of innovation opportunities in the firm's industry. A single question, "how important is innovation to performance in your industry?" was answered with a five-point scale ranging from "not important" to "very important." Respondents also identified their industry using the two-digit standard industrial classification that begins with: (1) agriculture, (2) mining, (3) construction, (4) manufacturing, (5) transportation, (6) wholesale, (7) retail, (8) finance, and (9) services.

Descriptive Analyses

There is little research on family human capital, as operationalized in this study, so a brief descriptive analysis precedes hypothesis testing. The measures were tested for colinearity, reliability (Nunnally, 1978) and inter-rater agreement (Miller et al., 2008; Miller et al., 2009). Overall, the data appears statistically suitable to use in bi-variate correlation and multivariate regression analyses, seen in Table 1.

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Table 1
Descriptive statistics and bivariate correlation table

	Variables	N	Mean	Std. Deviation	1	2	3	4	5	6	7	8	9	10	11
1	Firm Atmosphere for Innovation	94	-	-	1										
2	Industry Dynamism	94	4.23	0.8	0.014	1									
3	Firm Age	94	24.04	18.9	-0.135	0.076	1								
4	Industry SIC Code	94	6.63	2.5	0.196	0.064	-0.103	1							
5	Firm Size, Number of Employees	94	25.93	41.5	-0.067	-0.012	.277**	-0.011	1						
6	Family Championing of Most Important Innovations	94	2.19	1.0	.222*	-0.028	-.203*	-0.178	-0.155	1					
7	Total Family Experience in Firm (Years)	94	39.2	35.1	-0.130	0.048	.555**	-0.136	.371**	-0.061	1				
8	Family Championing by Experience in Firm	92	3302.7	2960.3	-0.089	0.042	.479**	-.212*	.224*	0.199	.854**	1			
9	Average Family Education	94	2.19	1.1	0.200	0.168	0.144	0.035	.339**	0.115	.471**	.490**	1		
10	Family Championing by Family Education	86	0.89	0.3	0.186	0.129	0.069	0.061	0.005	-0.037	-0.036	-0.072	.272*	1	
11	Organizational Innovation	94	-	-	.301**	.316**	-0.044	-0.119	0.004	0.143	-0.174	-0.191	.212*	.366**	1

** $p < .01$
* $p < .05$

Family Involvement

In the 94 small family firms, 263 family members worked full- or part-time in the last eighteen months, an average of 2.8 family employees per firm. Ranging from two to seven, 57.4% of the small family firms had two family employees, 21.3% had three, 12.8% had four, and the remaining 8.5% had five, six, or seven. The average of 2.8 family employees represents 10.8% of the average of 25.85 total employees (family and non-family). Family members were the chief executives in all 94 firms.

Family Human Capital

The average family employee has 13.5 years of working experience in the family firm. The 13.5-year average-tenures of family employees greatly exceeds the national average of 4.6 years. Of 263 family employees, 78% had post-secondary degrees, which is more than double the national rate of 36.7%.

Hypothesis Tests and Analysis

Hypothesis 1, that family employees will champion a disproportionately larger number of most-important inno-

vations than non-family members, is supported. Statistical Package for Social Sciences (SPSS) was used to perform an Independent Samples *t* Test on the data. The mean number of "most-important" innovations championed by family employees of (χ2.19; *s* 1.091) is statistically larger than the mean of "most-important" innovations championed by non-family employees (χ.37; *s* .748) at the .000 level. Firms reported an average of 2.56 most-important innovations, 85.5% of which were championed by family employees. We have little data in the literature to compare and interpret this finding. The 85.5% is dominant but also shows that championing is not necessarily a form of influence that is exclusive to family members. The level of championing performed by family employees is even more disproportionate when considering that family members represent only 10.8% of employees.

In Table 2 we report the data from multiple linear regression models conducted in SPSS. Model 1 regresses the control variables, organizational age and size, atmosphere for innovation, industry classification, and industry dynamism against organizational innovation. The model explains 48.2% of the variance in organizational innovation (AR^2 .189; αF .000).

In Table 2, we find support for both hypotheses regarding the moderating impact of family human capital on family influence. First, the relationship between the proportion of most important innovations championed by family members and organizational innovation is insignificant as shown in model 2. Model 2 provides no greater explanation of variance in organizational innovation than the control model, and the family championing item is insignificant. The insignificance of model 2 is important for establishing the role of moderating influences. In model three, we see explained variance increase from 48.2% to 61.1% with the addition of the two family-human-capital variables and the adjusted *R*-squared statistic rising from .189 to .318. When family championing levels interact with the family's total years of experience working in the family firm, there is a significant and negative relationship with innovation (β -.256, α .024). Conversely, when family championing levels interact with education levels, there is significant and positive relationship with innovation (β .267, α .005). As hypothesized,

Table 2
Multivariate linear regression models of the adoption of innovation

Variables	Model 1			Model 2			Model 3		
	Std. Coefficients	Std. Error	Sig.	Std. Coefficients	Std. Error	Sig.	Std. Coefficients	Std. Error	Sig.
Organizational Atmosphere	.333	.096	**	.323	.099	*	.313	.096	**
Industry Dynamism	.330	.115	**	.330	.116	**	.279	.112	**
Organization Age	-.058	.005		.051	.005		.037	.006	
Industry	-.211	.038	*	-.200	.040	*	-.272	.038	**
Organization Size (Employees)	.044	.002		.048	.002		.083	.002	
Family Championing				.042	.100				
Family Championing and Experience							-.256	.000	*
Family Championing and Education							.267	.374	**
Constant	-	.551	*	-	.636		-	.605	**
F	5.336		**	4.434		**	6.65		**
Explained Variance *R*	.482			.484			.611		
Adjusted *R*2	.189			.181			.318		
Change in *R*2	-			-.008			.129		
N	94			94			86		

** $p <$ .01
* $p <$ .05

the family influence of championing was difficult to assess without incorporating the moderating influence of human capital characteristics.

Discussion

We briefly summarize the findings and contextualize them in a multilevel view of the family firm. We first identified the championing of innovation as an important mechanism that mediates individual family employee influence on the firm. We then show the implausible finding that family championing influence appears uncorrelated with organizational innovation; it is implausible given the 85.5% level of family championing and the nature of these constructs. As is typical in the family business literature, the powerful influence of family appears dissipated and difficult to characterize without accounting for moderating forces. Lastly, we identify human capital variables that moderate and explain multiple variants of family influence on the adoption of innovation. Our specific model of family member involvement, behaviors, and characteristics produces quantifiable evidence of individual family members' contribution to family influence on the firm.

To answer the question of "so what?" we begin by referencing the multi-level "systemness" of the family firm. At the market level, family firm behavior and performance is not easily distinguishable from nonfamily firms (Chrisman et al., 2016). We found variability in innovation levels that significantly correlated with industry and industry dynamism. Especially in smaller firms, family influence may often be oriented toward marketplace conformity rather than reflecting a family-nature (Miller et al., 2012). In some instances, some consumers may appreciate firms that identify as family-owned and exhibit family values, culture and identity (Zellweger et al., 2010). However, from the perspective of strategic adaptation, promoting "family-owned" is one of the more flexible elements of firm strategy that families could emphasize or deemphasize as warranted by prevailing market conditions (Binz et al., 2018). Taking an ecological perspective on innovation, we speculate that small family firms prioritize *fitting-in* over distinguishing themselves from nonfamily firms.

At the firm level, we focus on the firm's necessity to adopt new physical and intellectual resources from time to time. Firm growth, which is one indicator of adaptive success, may require the incorporation of nonfamily financial and human capital and the professionalization of routines (Stewart & Hitt, 2012). Although organization size was insignificant in our range-restricted sample, our findings suggest a strong, and possibly limiting, relationship between family resources and firm behaviors. Decisions about which resources to maintain and which to change appear strongly biased toward family resources (Sharma & Manikutty, 2005). In this study, family employees dominated innovation adoption activities and most likely squeezed out nonfamily championing.

Family member involvement in the firm affects the family collective and family-level influence. Strong altruistic family relationships infuse the family firm with family concerns and objectives (Schulze et al., 2003). Family members may value and pursue socio-emotional benefits of working together alongside their personal and collective economic goals. However, in this data, we see high levels of family engagement in the most important economic and strategic activities of the firm. Family championing may be facilitated by family bonds but also reflects concerns for the economic wellbeing of the family and family members' responsibility to steward collective resources. The behaviors in this study seem better explained by a social capital rather than a socio-emotional wealth perspective.

The individual family member is neglected in many ways in the family business literature (Chirico & Salvato, 2014; Stewart & Hitt, 2012). This study goes beyond counting family members or focusing on the influential roles of founders and successors. Operationalizing family involvement as regular employment in the firm, we find that 56% of firms have two family employees and another 23% have three. This range limitation is conceptually and statistically relevant to theory development and testing. This study provides some ideas about developing appropriate aggregate constructs of the family in the family-firm context. Individual family members may contribute significantly to the family firm's character, identity, resources and behaviors; as these individuals come, go, and change, so too may the firm.

Family human capital is crucial to the explanatory power in this model, as we could not determine the influence of championing without accounting for its moderating effects. The notion of family human capital as a limited resource may not infer its insignificance. With only 2.8 family employees per firm, this data reflects extreme levels of influence that may restrict the use of nonfamily human capital and the firms' ability to grow. If so, this would apply to the great majority of family firms that typically employ fewer than 200 employees (Astrachan & Shanker, 2003). Furthermore, the small number of family employees does not constrain the quantitative and qualitative range of variation in educational and work experiences that we found in our data. This data suggests that simplistic characterizations of family human capital in the literature may miss important aspects of human capital complexity as well as human capital's importance in organizational contexts.

Practical Implications

The practical implications of this research, given the stated limitations, are for practitioners to be more aware of the strategic linkage between family human capital and organizational adoption of innovation. Family members may be likely to dominate innovation activities to the exclusion of non-family members. While this may not always be a problem, should the firm's needs change, family human capital is not a rapidly adaptive resource. With forethought and planning, family members' capabilities may be developed through training and education. However, to be prepared for unexpected situations small family firms should foster access to non-family human capital, including outside advisors for general knowledge and long-tenured employees for firm-specific know-how. This study provides further empirical evidence for a knowledge based approach to managing small family firms.

Limitations

This is an exploratory study conducted on a small sample of 94 firms using convenience-sampling techniques. While statistical tests show no signs of biases in the sample firms, generalizations should be limited. The relationships reported are based on survey data from a single respondent, which may inflate the strength of relationships. The question sequencing and use of standard human capital scales in the survey reduce spurious relationships and increase validity of the instrument. A sub-sample of the firms provided multiple responses that yielded acceptable levels of inter-rater reliability. These are significant results, using well-established constructs, that may point to future research opportunities rather than explaining a phenomenon in the general population of small family firms.

A larger sample might provide more information about the relationship between firm size and family human capital influence and tease out greater sensitivity between levels of education and years of experience. For example, this sample may have been too small to register the effects of advanced degrees. Beyond these sampling issues, the complexity of the human capital and innovation constructs as well as the narrowness of the championing construct present further limitations on generalizations. This is a highly specified model and care should be taken in making inferences about these constructs in alternative contexts. Family human capital was significantly influential in a carefully constructed context of innovation.

Future Research

Many researchers encouraged this examination of mediation and moderation in a multilevel model of the family firm (Gedajlovic et al., 2012; Kellermanns et al., 2008). We only scratch the surface of the complex constructs of human capital and innovation and examine one aspect of family firm behavior. Perhaps, the most parsimonious take away from this study is that mediators and moderators may help explain family influence from the individual level. Other mediators and moderators might explain different types and ways for individual family employees to contribute to family-level influence (Chrisman et al., 2016). Because there are so many important ways to address the multitude of interactions within a complex system, we focus our discussion of future research on the family human capital construct.

Explaining any family firm phenomenon that might be related to human capital, researchers might focus attention on the quality of education (Pérez-González, 2006), education in a business discipline (Verbeke & Kano, 2012), or studying a special curriculum for family businesses (Carsrud, 1994). A finer grained examination of experiences working outside the family firm may be sensitive to the role played, duration, and industry (Davidsson & Honig, 2003). How individual family employee human capital stores are aggregated may be particularly useful in understanding family-level influence. We know little about what unique knowledge family members might bring to the firm (Chirico & Salvato, 2014). Does it matter if family members' knowledge complements one another (Teece, 1986)?

Our data showed the employment of some more-educated family employees in less-innovative firms, which may be interpreted as the underutilization or underachievement of family human capital. To what degree do the pleasures of working alongside family members outweigh these human capital concerns? Dissatisfaction of family members has received attention in the family business literature (Kets de Vries, 1993), but with little human capital perspective. While underutilization denotes a problem, it would be helpful to provide qualitative and quantitative guidelines for families to address this issue, possibly reducing social and emotional strain. Some quantifiable aspects of the family human capital concept may provide important measures by which to compare competing social and economic goals in the family firm context.

Conclusion

Answering calls in the literature, we developed and tested a model linking individual family employees to fam-

ily influence and firm behaviors. Solid foundations in the human capital, innovation, and family business literatures provided the groundwork for reasonable hypotheses that were supported by the data. The data demonstrated the active involvement of family employees in important strategic activities. By linking family influence to individual family employees it becomes easy to see why family firms would vary so much in their behavior and performance. As family members change, by joining or leaving the firm, gaining experiences or education, maturing, experiencing health problems, or other personal issues, so too would the family's influence. A change in one family member's circumstances or plans can shift family influence from long term, even a transgenerational orientation, to a short-term view, of even selling or closing the firm.

We perceive a large contrast between an individual perspective on family influence, like we have presented, and the unified systems or essence perspectives. That being said, our hypotheses about individual family employee behaviors are heavily influenced by a family-systems-perspective. The individual- and system-perspectives may inform one another even though their foci are different. Strategic management researchers have described the shifting perspectives on strategy from internally focused on the firm (such as the resource or knowledge based views) to external focus (such as industrial organization or stakeholder theory) since the 1950's (Hoskisson et al., 1999). Family business researchers initially focused on individuals in the succession process and have more recently focused on a system perspective (Zahra & Sharma, 2004). We propose that, if the individual perspective can include more family members than just a founder or successor, family influence might become a more explanatory and predictive construct.

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