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The IMPACT of FAMILY SOCIAL CAPITAL on RESOURCE DEPLOYMENT in CHINESE ENTREPRENEURIAL FIRMS

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One of the most important determinants of performance for any firm is the unique bundle of resources the company possesses. To date, however, empirical results on whether “familiness” as an element of this resource bundle has a positive or negative impact on firm performance have been mixed (Dyer, 2018; Gottardo & Moisello, 2019; Oswald *et al.*, 2009; Pitchayado *et al.*, 2018). This paper employs structural equation modeling to examine how entrepreneurs in China’s Zhejiang Province include members of their nuclear families, extended kin networks, and professional networks in their top management teams to access different bundles of family and non-family human resources, leading to variance in firm performance results. We find firms that leverage “guanxi” (a particular concept of kin, common in China but not often employed as a construct in western-based research, which encompasses both extended family members and close friends) for industry, technical, or entrepreneurial expertise enjoy certain types of higher performance results. In comparison, firms that leverage nuclear family members for management or marketing expertise achieve certain types of lower performance results. Post-hoc analysis indicates that leveraging guanxi specifically for prior entrepreneurial experience or for technical expertise leads to greater employee growth and higher subjective assessment of success. Conversely, leveraging nuclear family members for management or technical expertise leads to lower levels of these same performance variables. However, only firm size, measured by number of employees at venture founding, is predictive of revenue growth.

INTRODUCTION

Research Question

The unique bundle of resources upon which a firm bases its competitive advantage has a significant impact on its performance. One of the major resources in most of these bundles is human knowledge, skills, and abilities. While capital, raw materials, equipment, facilities, and access to

information are all also crucial resources, how human beings employ these other resources to achieve the firm’s goals is usually a key determinant of success. Family businesses often gain these human resources by utilizing familial networks. However, the familial network is a construct that varies based on culture. This paper poses the research question: Is there a unique impact of “guanxi” (a mix of extended kin and close friends in Chinese culture) on firm

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performance? If so, how does this impact differ from that of nuclear family or non-family members, and which of these three sources of family human capital leads to superior performance? Under what conditions?

What We Know

Family business researchers recognize the interaction of family units, business units, and individual family members can lead to competitive advantages in some family firms (Mahto et al., 2018). For example, Habbershon et al. (2003) argue that a family's involvement in businesses may bring in resources unavailable to non-family firms, such as family-centered human, social, survivability, and governance capital that help with the operations of a business. The literature further suggests that family-endowed resources may take the form of family and kinship networks (Lester & Cannella, 2006), intangible family knowledge (Cabrera-Suárez et al., 2001), family reputation (Dyer, 2006), and social capital (Pearson et al., 2008).

While there is substantial research on the impact of "familiness" as a resource bundle, quantitative analyses of its correlation with firm performance have been mixed. For example, family influence has been found to positively facilitate the beneficial influence of dynamic capabilities and firm performance (Pitchayadol et al., 2018). Other scholars have found both positive and negative results, with first-generation family firms outperforming non-family firms but later-generation family firms underperforming compared to non-family firms (Gottardo & Moisello, 2019). Still other researchers have found that higher percentages of family ownership are correlated with lower sales growth and lower financial performance in a large sample of private and public companies (Oswald et al., 2009).

The Gap in Understanding

In aggregate, it is unclear whether utilizing family members' knowledge, skills, and abilities to manage a firm, instead of using those same resources from non-family members, results in better performance. Researchers are now studying specific conditions and family resources which lead to superior performance (Gedajlovic et al., 2012). For example, researchers have found that having few or many family members in a firm's top management team (TMT) can lead to good performance but having a roughly equal proportion of family and non-family members in the TMT can create schisms which contribute to lower firm performance (Minichilli et al., 2010). Other scholars have found that families which communicate and make decisions in open and collaborative ways achieve better performance results, while families which communicate and make decisions in more structured or hierarchical ways achieve worse performance results (Woods et al., 2019). Still others have found that family champions of innovation within firms achieve superior results, but only if they have the broader perspective of a college education (Gottschall & Woods, 2020). We extend this contingency-oriented research.

How We Will Close the Gap

We extend family-firm research by recognizing and analyzing "familiness" in a different cultural context. Specifically, we examine *guanxi*, a culturally specific type of family resource employed by Chinese entrepreneurial start-ups. We analyze how employing two different types of family members, nuclear family versus *guanxi*, to access two distinct types of resources, relationship-based resources versus knowledge-based resources, has a differential impact on the success and growth of 283 Chinese startup ventures. We also compare this with the impact of utilizing former work colleagues to access the same resources.

THEORETICAL BACKGROUND & DEVELOPMENT OF HYPOTHESES

The resource-based view of the firm (Barney, 1991) recognizes resources as key drivers to a firm's long-term success. The resource-based view postulates that there are different types of resources upon which a firm can base its unique competitive advantage, and there are different types of social capital which a firm can leverage to access these resources (Wright et al., 2001). Some particularly important types of resources accessible through social capital are industry, technical, entrepreneurial, management, and marketing knowledge and capabilities (d'Arcimoles, 1997; Youndt et al., 1996).

We agree with many entrepreneurship scholars who posit that industry, technical, and entrepreneurial knowledge are a key, integrated, interdependent bundle which impacts the performance of entrepreneurial firms (Agarwal et al., 2004; Deligianni et al., 2019; Gruber et al., 2013; Shane, 2000; Song et al., 2017; Sullivan & Marvel, 2011; Wiklund et al., 2003). This is the case because the ability to recognize an opportunity to resolve inefficiencies or problems is significantly enhanced by knowledge of the operations and competitive landscape of firms in a certain industry and the technical challenges faced by firms in that industry (Agarwal et al., 2004). We also agree with recent work by systems theory scholars who argue that the management and marketing functions of businesses should be considered as integrated with each other in a holistic view of firm operations (Bruni et al., 2018). This is the case because marketing is seen by these systems scholars as a behavior rather than a knowledge set, and thus should be seen as an integrated part of all the behaviors engaged in by managers as they interact with each other, external customers, and external partners to run the firm's operations (Bruni et al., 2018). As we will explore below, Chinese entrepreneurs tend to employ different types of social logic in acquiring knowledge-based resources versus relationship-based resources, leading them to draw on different social capital sources to acquire knowledge-based versus relationship-based resources through the top management teams that help them run their startups (Liu & Hsu, 2011; Park & Seo, 2013).

Resource dependence theory (Pfeffer & Salancik, 1978) posits that organizations survive to the extent that their top managers are effective in transacting with individuals

from interest groups which provide vital resources to the organization. Three important interest groups which often provide resources to new ventures are nuclear family, extended kin, and business colleagues (Olson et al., 2003; Yang et al., 2011). Social capital theory asserts that investment in social relationships by individuals yields access to resources embedded with those individuals (Lin, 2017), and high social capital tends to engender knowledge exchange activities, which are critical for superior business performance (Wright et al., 2001). Different individuals from these interest groups with whom a new venture founder relates each have access to different resources, and leveraging these different resources can lead to different firm performance results (Jenssen, 2001). Despite the growing trend of recognizing social capital as a rare resource, there is limited research on how social capital plays a role in the context of an emerging economy (Liu & Hsu, 2011; Park & Seo, 2013).

Capability-Based Versus Relationship-Based Resource Acquisition Logic

In emerging economies like China, at least two major logics drive the acquisition of resources (Liu & Hsu, 2011; Park & Seo, 2013). The first is capability-based logic, which concentrates on acquiring resources because they are valuable or useful and can be used in the firm's operations (Liu & Hsu, 2011). Capability-based logic focuses on what is needed and then acquires the resource which most closely fits that need (Liu & Hsu, 2011), leading the entrepreneur to seek out resources through a formal purchasing or hiring strategy. Such a purchasing/hiring strategy is often associated with higher levels of firm performance (Kang et al., 2018). The other type of acquisition strategy is relationship-based logic, which acquires resources because they are available from family, friends, or work colleagues (Park & Seo, 2013). Relationship-based logic focuses on employing physical and human resources from individuals with whom the entrepreneur has important relationships (Park & Seo, 2013). This often leads to the resources driving the business' strategy – a phenomenon often associated with lower levels of firm performance (Sharma & Manikutty, 2005).

Relationship-Based Versus Knowledge-Based Resources

These two types of acquisition strategies often result in the entrepreneur acquiring resources that may be more relationship-based or more knowledge-based. Relationship-based resources draw heavily on an individual's ability to understand and thrive in interpersonal relationships (Pant & Baroudi, 2008). Examples of such resources include individuals' management or marketing abilities. These relationship-based resources are less industry focused and primarily related to overall people skills and behaviors, making them more generalizable across various industries (Park & Seo, 2013).

Knowledge-based resources are those that generally come from time invested individually in one's work or personal time (Mai & Zheng, 2013). Examples of such resources include expertise about product technology and in-

sight into the firm's industry and external environment. Another example would be knowledge about a specific entrepreneurial opportunity such as market size, competition, financial projections, and other specifics that give the entrepreneur information to make decisions about the merits of the venture. Yet another example would be prior experience with entrepreneurship. The entrepreneur may possess these skills and fulfill these roles him or herself or can use the above resource acquisition methods to obtain the needed human resources.

Variance in the Efficacy of Resources from Different Social Capital Sources

Nuclear Family. When starting a venture, important jobs are often given to a close family member, especially in a family-oriented culture like China (Eddleston et al., 2010; Vinton, 1998). This is done both because of the benefits which accrue to the family member (Vinton, 1998) and because of the high level of trust often felt between family members (Eddleston et al., 2010). Operational positions of management and marketing are often highly respected and well-paid (Kampelmann & Rycx, 2012). Venture founders must have great trust in the individuals who hold these integral positions (Julian et al., 2010). For these reasons, management and marketing positions are often staffed by nuclear family members in Chinese small businesses. On the other hand, because technical and industry knowledge requires highly specialized training or experience, relatively small nuclear family networks are often not broad enough to provide the necessary human capital compared to larger networks (Sirmon & Hitt, 2003). For this reason, Chinese entrepreneurs may not be able to seek out technical or industry expertise for their ventures with their nuclear family members as well as they can with extended kin.

Guanxi Kin Network. Extended family and close friends' ("guanxi kin") potentially broader scope of connections often include individuals with technical or industry-specific knowledge based outside of the entrepreneur's organization. Technical and industry-specific knowledge are often absent, or at the least lacking depth and diversity, within the nuclear family's base of more general operational knowledge (Moreno-Pérez & Lobley, 2015). In addition, knowledge of specific entrepreneurial opportunities and prior experience with entrepreneurship can differ greatly between nuclear family and guanxi kin. Nuclear family members often have a limited reach of information because of the amount of time they spend in close proximity with each other (Verver & Koning, 2018). This closeness provides a way of understanding each other's knowledge and expertise, but it can also serve as an echo chamber that may not be helpful when decisions require new ways of thinking or expertise beyond the nuclear family's scope.

Guanxi kin groups, on the other hand, often have a significantly larger network than the nuclear family (Verver & Koning, 2018), which frequently allows for access to a much greater range of knowledge and expertise. Thus, guanxi kin groups may often be a source of skilled and still relatively trusted individuals when specific technical skills or a broader industry knowledge are required for the entre-

preneur's venture. For example, guanxi kin groups may be more helpful when making decisions that require innovative and diverse ways of thinking such as new potential customer niches or opportunity recognition within an industry.

However, in guanxi kin groups, relationship bonds are generally weaker than those within the nuclear family due to relative lack of proximity and time investment with more distant relatives and friends (Verver & Koning, 2018). Because of this, feelings of trust and indebtedness are felt less towards one's guanxi kin than they are towards the nuclear family (Verver & Koning, 2018). This can lead to guanxi kin sometimes being overlooked for jobs of perceived importance and respect in favor of nuclear family members (Poelking, 2017). For this reason, operational positions of management and marketing may only be intermittently filled by guanxi kin. Though feelings of trust and indebtedness are lower than those of nuclear family members, individuals within one's guanxi kin group still share an inherent level of fellowship with the individual above that of an average potential hire due to familial and friendship bonds (Vinton, 1998).

Professional Network. Professional networks of former work colleagues can be highly flexible hiring pools (Gallagher & Sias, 2009; Thomas et al., 2019). Work colleagues often form strong interpersonal connections due to the long periods they spend together, often equivalent to or even greater than the time spent with one's own nuclear family (Nie et al., 2015). In addition, the professional environment of the work relationship formed between coworkers, who often must rely on each other to achieve important goals, frequently creates a trusted, reciprocal relationship between the individuals (Lau & Liden, 2008). Because of these reasons, new venture founders may often place past coworkers into important and trusted positions such as management and marketing.

Due to the wide array of positions and skill sets required for most businesses to function, and the associated greater size of a professional network compared to a nuclear family, the diversity of professional expertise among one's former work colleagues can be quite high (Thomas et al., 2019). However, because of their previous close working relationship, the expertise of former coworkers may be more readily known to an entrepreneur than that of extended kin or close friends (Verver & Koning, 2018) or new hires (Gallagher & Sias, 2009). As previously stated with guanxi kin groups, larger and broader networks such as an individual's professional contacts expand access to potential technical and industry knowledge and to individuals with prior entrepreneurial experience or knowledge of specific entrepreneurial opportunities (Verver and Konig, 2018). Due to these factors, many entrepreneurs may also often hire past coworkers for jobs demanding technical or industry expertise.

Hypotheses

As described above, there are two different types of family relationships – nuclear family relationships and relationships with one's extended kin. Nuclear family relation-

ships are often characterized by a high level of time and energy investment throughout the entrepreneur's life (Sharma et al., 1997) with individuals who have relatively homogenous social networks (Distelberg & Blow, 2011). Because of the feelings of trust or indebtedness that usually develop in nuclear families, such family members tend to be acquired as relationship-based human resources. This often leads to family members being placed into management or marketing positions because of these positions' relationship-based nature (Gottschall & Woods, 2020). According to Trevino (1986), managers' judgements are heavily affected both by their individual value systems and situational contingencies. In the context of East Asian countries or regions, the family culture seems to be a factor that may contribute to either positive or harmful consequences (Ho & Redfern, 2010). Consequentially, the strong histories and connections shared by such individuals can lead to managers and marketers from the nuclear family being saddled with strong emotions toward their coworkers (both positive and negative). This can cloud these individuals' judgment as managers and marketers and lead to lower performance results for the firm.

As noted in Nikiforou (2020), prior research has recognized that network structure and network relationships play a dynamic role in firm performance (Floyd & Wooldridge, 1999; Simsek et al., 2003). Close knit networks such as those created by the nuclear family generate more redundant and less novel information and ideas (Ahuja, 2000; Coleman, 1990; Reagans & McEvily, 2003) compared to more open networks that have partners who are less intimately involved with each other (Burt, 1992, p. 2005; McEvily & Zaheer, 1999). As mentioned previously, the nuclear family group can be limited both in its size and in the breadth of its knowledge-based resources (Moreno-Pérez & Loble, 2015; Verver & Koning, 2018). If nuclear family members are used for their industry, market, or entrepreneurial knowledge and expertise, the entrepreneur utilizing them as human resources may have a narrower view of the market than competitors and therefore may miss opportunities that would have been apparent if they had more complete industry information. This could result in lower performance results compared to other similar businesses in the same industry.

***Hypothesis 1:** New ventures which use individuals from the founder's nuclear family for management or marketing expertise will achieve lower performance results.*

***Hypothesis 2:** New ventures which use individuals from the founder's nuclear family for industry, technical, or entrepreneurial expertise will achieve lower performance results.*

Relationships with one's extended kin are often characterized by a moderate level of time and energy investment throughout the entrepreneur's life (Karra et al., 2006) with individuals connected to broad contact networks (Anderson et al., 2005). Because of the relative lack of the close familial bonds which characterize nuclear family relationships and the wider pool of potential individuals, acquisition of hires from extended kin groups tends to be capability-based. This allows for individuals from extended kin

groups to be brought in based on their proficiency in an area of need rather than due to feelings of indebtedness. This can lead to individuals from the extended kin network being somewhat dispassionate managers and marketers but also possessing a high level of buy-in, which can lead to committed, rational decisions, generating higher performance results for the firm (Ahluwalia et al., 2017).

For the reasons stated above, the hiring of extended kin lends itself to the knowledge-based resource category. As such, it typically works well as a pathway for acquiring technical, industry, and entrepreneurial knowledge ranging from market and financial information to prior experience with industry-specific technologies. In addition to a wide range of technical knowledge, this also brings to the firm people with diverse perspectives and problem-solving techniques. This broader range of skills and problem-solving techniques enables more potential methods of value delivery, leading to a competitive edge over rivals and higher performance results for the firm (Gottschall & Woods, 2020). This broadness of skills and abilities should be even greater in the case of *guanxi*, which includes both extended kin and close friends (Nikiforou et al., 2020).

Hypothesis 3: New ventures that use individuals from the founder's guanxi kin network for management or marketing expertise will achieve higher performance results.

Hypothesis 4: New ventures which use individuals from the founder's guanxi kin network for industry, technical, or entrepreneurial expertise will achieve higher performance results.

Professional relationships are often characterized by a high level of time and energy investment in the entrepreneur's recent past (Wu et al., 2010) with people who are connected to relatively broad social networks (Abrahamsen et al., 2012). Because of this, individuals who share work experience can have close relational bonds, even though they are expressed through a professional framework. This allows for the acquisition of relationship-based resources using capability-based acquisition logic. This can lead to individuals from the professional network being strongly passionate but rational managers and marketers, which can lead to higher performance results for the firm.

Because of the relationship-based nature of this resource group, broader technical knowledge beyond the industry in which the professional colleagues work can be limited. Often, industry knowledge held by work colleagues is held by the entrepreneur as well, reducing the diversity of industry and technical expertise in this resource group and creating redundancy in knowledge of entrepreneurial opportunities. This adds less to the entrepreneur's wider knowledge pool than the knowledge that can be accessed via the entrepreneur's *guanxi* kin. Because of this, variation and nuance of ideas can be more limited. Since it can only bring knowledge to bear for the firm from a more modest spectrum of sources and perspectives, utilization of professional networks as a source for industry, technical, or entrepreneurial expertise can lead to lower performance results for the firm.

Hypothesis 5: New ventures which use the founder's work colleagues for management or marketing expertise will achieve higher performance results.

Hypothesis 6: New ventures which use the founder's work colleagues for industry, technical, or entrepreneurial expertise will achieve lower performance results.

METHODS

Sample

We tested our hypotheses using survey responses from 283 new venture founders in Zhejiang Province, China collected in 2013. The survey was conducted through a joint effort between the Department of Science and Technology of Zhejiang Province and a university located in Southeast China. Zhejiang is known as a regional hub for entrepreneurial activities and small businesses. Most private firms in Zhejiang also have some level of family involvement in business, which makes it appropriate to use as our sample. Family influence on the business can be stronger in Chinese family firms due to the pivotal role of the founder and his or her family in these firms (Gupta & Levenburg, 2010). Furthermore, a large number of family firms in China are currently undergoing business succession, hence understanding the efficacy of different types of family-endowed resources could be critical for human resource decisions which impact post-succession business success.

Questionnaires were sent to all businesses registered as high-tech small and medium-sized firms in Zhejiang's Department of Science and Technology. Respondents were business owners and managers who were largely members of the owning family. Before conducting the primary analysis, we used t-tests to compare early and late respondents to the survey along the variables of interest and determined that non-response bias did not appear to be a problem (Kanuk & Berenson, 1975).

Firms ranged in size from 1-2 employees to 101+, with an average size of 2.83 employees. Firms came from eight major SIC code industries, with over half coming from the manufacturing (34.3%) and retail (20.1%) sectors. Respondents in the sample were primarily male (82%) and ranged in age from 22 to 58 years old, with an average age of just over 40 years old. Education levels were relatively low, with nearly 2/3 of the respondents (64.3%) having no college education and only 4.6% having advanced degrees. Professional experience levels were also relatively low, with 2/3 of the respondents (66.4%) having less than five years' professional work experience and only 8.9% having over 15 years' experience. For management and marketing work, 34.3% of the ventures used work colleagues, 25.4% used *guanxi* kin, and 10.6% used nuclear family members. For industry, technical, and entrepreneurial expertise, 60.8% of the ventures used work colleagues, 56.2% of the ventures used *guanxi* kin, and 23.7% used nuclear family members.

Independent Variables – Management and Marketing Expertise

Use of the Entrepreneur's Nuclear Family Members for Management or Marketing Expertise. Use of the entrepreneur's nuclear family members for management or marketing expertise was measured using a 5-point Likert scale (1 = Not at all, 5 = A great deal).

neur's nuclear family members for management or marketing expertise was measured using two yes/no survey questions, 1) whether the respondent used nuclear family members for managerial and administrative skills and 2) whether the respondent used nuclear family members for marketing channel expertise. Scores for the combined variable ranged from 0 to 2. Cronbach's Alpha for these two questions was 0.701.

Use of the Entrepreneur's Guanxi Kin for Management or Marketing Expertise. Use of the entrepreneur's guanxi kin for management or marketing expertise was measured using two yes/no survey questions, 1) whether the respondent used guanxi kin for managerial or administrative skills and 2) whether the respondent used guanxi kin for marketing channel expertise. Scores for the combined variable ranged from 0 to 2. Cronbach's Alpha for these two questions was 0.311. Given the low reliability, our test of hypothesis 3 should be regarded as inconclusive regardless of statistical significance.

Use of the Entrepreneur's Work Colleagues for Management or Marketing Expertise. Use of the entrepreneur's work colleagues for management or marketing expertise was measured using two yes/no survey questions, 1) whether the respondent used work colleagues for managerial and administrative skills and 2) whether the respondent used work colleagues for marketing channel expertise. Scores for the combined variable ranged from 0 to 2. Cronbach's Alpha for these two questions was 0.621, a borderline but acceptable level of reliability (Pallant, 2001).

Independent Variables – Industry, Technical, and Entrepreneurial Expertise

Use of the Entrepreneur's Nuclear Family Members for Industry, Technical, or Entrepreneurial Expertise. Use of the entrepreneur's nuclear family members for industry, technical, or entrepreneurial expertise was measured using four yes/no survey questions: 1) whether the respondent used nuclear family members for expertise about technology, products, or services, 2) whether the respondent used nuclear family members for industry knowledge, 3) whether the respondent consulted nuclear family members for information about the entrepreneurial opportunity, and 4) whether the respondent looked to nuclear family members as a source of entrepreneurial motivation (used as a proxy for prior entrepreneurial experience). Scores for the combined variable ranged from 0 to 3. Cronbach's Alpha for these four questions was 0.421. Given the low reliability, our test of hypothesis 2 should be regarded as inconclusive regardless of statistical significance.

Use of the Entrepreneur's Guanxi Kin for Industry, Technical, or Entrepreneurial Expertise. Use of the entrepreneur's guanxi kin for industry, technical, or entrepreneurial expertise was measured using four yes/no survey questions, 1) whether the respondent used guanxi kin for expertise about technology, products, or services, 2) whether the respondent used guanxi kin for industry knowledge, 3) whether the respondent consulted guanxi kin for information about the entrepreneurial opportunity, and 4) whether the respondent looked to guanxi kin as source of entrepreneurial

motivation (used as a proxy for prior entrepreneurial experience). Scores for the combined variable ranged from 0 to 4. Cronbach's Alpha for these four questions was 0.613, a borderline but acceptable level of reliability (Pallant, 2001).

Use of the Entrepreneur's Work Colleagues for Industry, Technical, or Entrepreneurial Expertise. Use of the entrepreneur's work colleagues for industry, technical, or entrepreneurial expertise was measured using four yes/no survey questions, 1) whether the respondent used work colleagues for expertise about technology, products, or services, 2) whether the respondent used work colleagues for industry knowledge, 3) whether the respondent consulted work colleagues for information about the entrepreneurial opportunity, and 4) whether the respondent looked to work colleagues as source of entrepreneurial motivation (used as a proxy for prior entrepreneurial experience). Scores for the combined variable ranged from 0 to 4. Cronbach's Alpha for these four questions was 0.649, a borderline but acceptable level of reliability (Pallant, 2001).

Dependent Variable – Venture Performance

Venture performance was measured using five survey questions: 1) revenue growth (5-point Likert scale with options ranging from low to high of 0-50% to over 200%), 2) employee growth (3-point Likert scale with options ranging from low to high of *reduce, no change, and increase*), 3) business satisfaction (4-point Likert scale with options ranging from low to high of *not satisfied to very satisfied*), 4) future growth plans (3-point Likert scale with options ranging from low to high of *reduce size, maintain the status quo, and expand the scale*), and 5) overall assessment of the entrepreneurial environment (5-point Likert scale with options ranging from low to high of *poor to very good*). The scales were normalized before calculating the combined variable, which ranged in scores from 0.83 to 5.00. Cronbach's Alpha for these four questions was 0.613, a borderline but acceptable level of reliability (Pallant, 2001).

Control variables of interest included firm size, industry in which the venture was active, respondent gender, respondent age, respondent education level, and respondent work experience. These variables were selected because prior research has suggested their import to the success of a new entrepreneurial venture (Indarti & Langenberg, 2004). Firm size and industry both correlate with growth potential. Gender, age, education level, and work experience are all correlated with both growth potential and satisfaction levels. The descriptive statistics and correlation matrix for the variables used in our analysis are summarized in [Table 1](#).

Analysis Procedures

The data were modeled using structural equation modeling with SPSS 28 and Amos 26. An initial model reflecting all the hypotheses above produced an acceptable model fit. χ^2/df , which addresses the sensitivity to sample size of the χ^2 statistic by considering degrees of freedom, was 2.687. Good fit is indicated by values less than 5 (Statistics Solutions, 2021). RMSEA, which compares the specified model

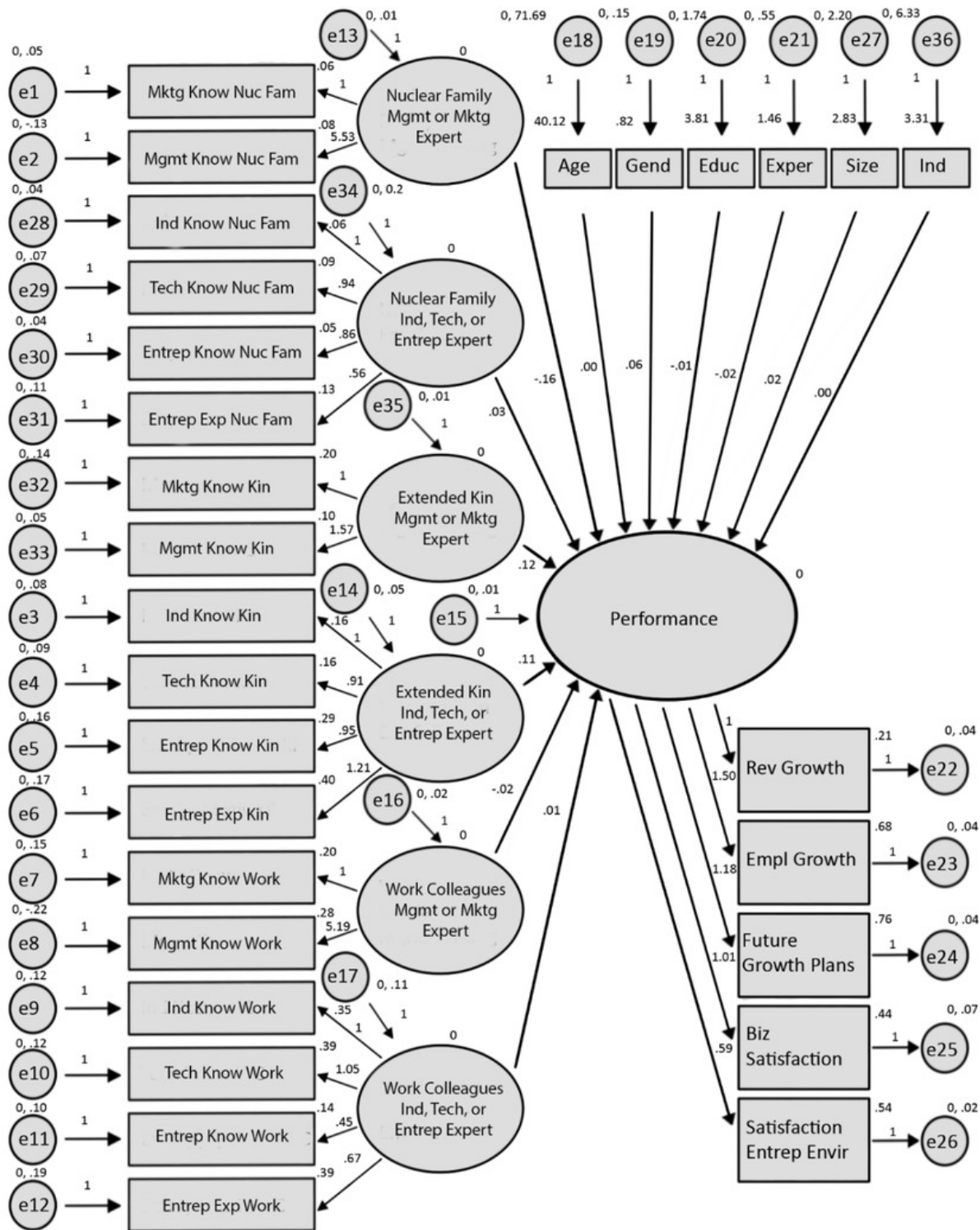


Figure 1. SEM Model

with a saturated model, was 0.077, below the upper acceptable threshold for RMSEA of 0.08. CFI (0.514), which reflects how the current model fits compared to a baseline or null model, was also below the minimum threshold value of 0.90. Removal of non-significant variables did not significantly improve the model, so this model was retained (Figure 1). The path coefficients of this model, along with their associated *p* values, are illustrated in Table 2.

Results

The results of the hypothesis tests are included in Table 2. We found two significant results. Our results support hypothesis one, such that *using nuclear family members for management or marketing expertise* had a negative effect on *venture performance* ($\beta = -0.163$, $p < .009$). Our results also support hypothesis four, such that *using guanxi kin for in-*

Table 1. Correlation Matrix

		Mean	S.D.	1.	2.	3.	4.	5.	6.
1.	Firm Size	2.83	1.48	1.000					
2.	Industry	3.31	2.52	-0.109	1.000				
3.	Age	40.12	8.48	0.203**	-0.120*	1.000			
4.	Gender	0.82	0.38	0.249**	-0.056	0.105	1.000		
5.	Education	3.81	1.32	-0.132*	-0.162**	0.269**	-0.061	1.000	
6.	Wk. Exp.	1.46	0.74	0.056	0.033	0.422**	0.077	0.024	1.000
7.	NF - MM	0.15	0.46	-0.045	-0.101	0.087	-0.009	0.181**	0.040
8.	NF - ITE	0.33	0.66	-0.026	-0.084	-0.091	-0.132*	0.043	-0.036
9.	GK - MM	0.30	0.54	-0.094	-0.077	0.090	0.002	0.153**	-0.029
10.	GK - ITE	1.00	1.15	-0.160**	-0.061	0.059	0.024	0.187**	-0.170**
11.	WC - MM	0.48	0.73	0.183**	-0.009	-0.025	0.070	-0.196**	0.171**
12.	WC - ITE	1.27	1.27	0.185**	-0.107	0.141*	0.092	-0.010	0.298**
13.	Ven. Perf.	3.17	0.75	0.252**	-0.054	0.105	0.228**	-0.094	-0.071

Note. Wk. Exp. = Work Experience; NF= Use of Nuclear Family, GK = Use of Guanxi Kin, WC = Use of Work Colleagues; MM = Management and Marketing, ITE = Industry, Technical, or Entrepreneurial Expertise; Ven. Perf. = Venture Performance

* $p < .01$, two-tailed; ** $p < .05$, two-tailed

Table 1 – Continued

		Mean	S.D.	7.	8.	9.	10.	11.	12.	13.
1.	Firm Size	2.83	1.48							
2.	Industry	3.31	2.52							
3.	Age	40.12	8.48							
4.	Gender	0.82	0.38							
5.	Education	3.81	1.32							
6.	Wk. Exp	1.46	0.74							
7.	NFMM	0.15	0.46	1.000						
8.	NFITE	0.33	0.66	0.308**	1.000					
9.	GKMM	0.30	0.54	-0.049	-0.092	1.000				
10.	GKITE	1.00	1.15	0.174**	-0.052	0.421**	1.000			
11.	WCMM	0.48	0.73	-0.204**	-0.135*	-0.102	-0.208**	1.000		
12.	WC ITE	1.27	1.27	-0.062	-0.164**	-0.101	-0.341**	0.541**	1.000	
13.	Ven. Perf.	3.17	0.75	-0.108	-0.020	0.080	0.145*	0.050	-0.020	1.000

Note. Wk. Exp. = Work Experience; NF= Use of Nuclear Family, GK = Use of Guanxi Kin, WC = Use of Work Colleagues; MM = Management and Marketing, ITE = Industry, Technical, or Entrepreneurial Expertise; Ven. Perf. = Venture Performance

* $p < .01$, two-tailed; ** $p < .05$, two-tailed

Table 2. SEM Model Results

Hypothesis	Predictor Variable	Path Coefficient	P
1	Using Nuclear Family Members for Management or Marketing Expertise	-0.163	0.009
2	Using Nuclear Family Members for Industry, Technical, or Entrepreneurial Expertise	0.029	0.728
3	Using Guanxi Kin for Management or Marketing Expertise	0.124	0.227
4	Using Guanxi Kin for Industry, Technical, or Entrepreneurial Expertise	0.109	0.016
5	Using Work Colleagues for Management or Marketing Expertise	-0.018	0.654
6	Using Work Colleagues for Industry Technical, or Entrepreneurial Expertise	0.015	0.582
N/A	Firm Size (Number of Employees at Venture Founding)	0.022	0.001
N/A	Industry	0.000	0.081
N/A	Age	0.002	0.041
N/A	Gender	0.065	0.002
N/A	Education	-0.014	0.017
N/A	Work Experience	-0.022	0.028

dustry, technical, or entrepreneurial expertise had a positive effect on venture performance ($\beta = 0.109, p < .016$).

Post-hoc Analysis

Given the fact that 56 of our respondent firms had only one or two employees, making assessment of top management team characteristics difficult, we re-ran our analysis with a smaller sample of only firms with three or more employees ($n = 227$). The results remained the same.

Given our borderline construct reliabilities, and in order to contribute a new, more specific description of the ways in which different types of nuclear family versus extended (guanxi) kin involvement in startup businesses impact different types of firm performance, we conducted an additional stepwise regression analysis of how each of our individual independent variable measures impacted both our multi-measure dependent variable and each of our individual dependent variable measures. For prediction of the multi-measure dependent variable, this analysis revealed that *using guanxi kin for prior entrepreneurial experience* had a positive effect on *venture performance* ($\beta = 0.340, p < .001$) and *using nuclear family members for management expertise* ($\beta = -0.470, p < .002$) had a negative effect on *venture performance*. *Firm Size* (measured as number of employees at venture founding) was also positively predictive of *venture performance* ($\beta = 0.067, p < .050$). For prediction of individual dependent variable measures, this analysis revealed that *using guanxi kin for prior entrepreneurial experience* had a positive impact on *employee growth* ($\beta = 0.097, p < .002$), *using guanxi kin for management expertise* had a positive impact on *employee growth* ($\beta = 0.109, p < .028$), and *using nuclear family members for management expertise* had a negative impact on *employee growth* ($\beta = -0.199, p < .001$). This analysis further revealed that *using guanxi kin for prior entrepreneurial experience* had a positive impact on *business satisfaction* ($\beta = 0.090, p < .019$). Additionally, this analysis revealed that *using guanxi kin for technical expertise* had a positive impact on *overall assessment of the entrepreneur-*

ial environment ($\beta = 0.087, p < .003$) and *using nuclear family members for technical expertise* had a negative impact on *overall assessment of the entrepreneurial environment* ($\beta = -0.082, p < .038$). *Firm size* was also positively predictive of *overall assessment of the entrepreneurial environment* ($\beta = 0.019, p < .017$). Finally, this analysis revealed that only *firm size* was predictive of *revenue growth* ($\beta = 0.0280, p < .025$) and only *respondent age* was predictive of *future growth plans* ($\beta = -0.003, p < .035$).

DISCUSSION

We started this paper asking the research question: is there a unique impact of “guanxi” (a mix of extended kin and close friends) on firm performance? If so, how does this impact differ from that of nuclear family or non-family members, and each of these three sources of human capital leads to superior performance? Under what conditions? The resource-based view of the firm suggests that businesses derive competitive advantage from valuable, rare, and inimitable bundles of resources, and resource dependence theory posits that firms acquire resources through their top managers. This study’s results suggest that the performance of new ventures may improve as founders tap into a mixed network of extended kin and close friends for industry, technical, or entrepreneurial expertise. The results also suggest that new venture founders may want to rely less heavily on using nuclear family members for management or marketing expertise to avoid potential growth and satisfaction pitfalls.

We began by examining the difference between two resource acquisition strategies: capability-based logic and relationship-based logic. We outlined how capability-based logic tends to produce superior results, which was supported by our results. New venture founders who used nuclear family members for management or marketing, due to relationship-based logic, achieved lower performance results. Meanwhile, new venture founders who utilized a mix of extended kin and close friends for industry, technical,

or entrepreneurial expertise, due to capability-based logic, achieved higher performance results. This suggests that considering the resource needs of the venture on their own merits, without regard for including resources just because they are possessed by individuals with whom one has a close personal relationship, may be an effective method for acquiring resources for an entrepreneurial startup.

We continued by looking at two different types of critical human resources, relationship-based resources and knowledge-based resources, and considered the efficacy of drawing each of these types of resources from each of three potential social capital sources: the entrepreneur's nuclear family, network of extended kin and close friends, or professional network. We posited that relationship-based resources would most often come from the entrepreneur's nuclear family, and to a lesser extent from the entrepreneur's professional network. We also posited that knowledge-based resources would most often come from the entrepreneur's network of extended kin and close friends, and to a lesser extent from the entrepreneur's professional network. Our results bore out this logic.

The variable *use of nuclear family members for industry, technical, or entrepreneurial expertise* showed poor construct reliability. One potential explanation for this may be that nuclear family members don't have broad enough differences in their knowledge and experience to often find knowledge of a particular industry, knowledge of the technical aspects of products, and the ability to recognize and understand entrepreneurial opportunities within one nuclear family group. While experience with the nuclear family may often be the motivation for one of the members to start a new business, that family member normally must cooperate with extended kin, friends, or work colleagues to find individuals with the other knowledge and abilities. It would be beneficial for future research to measure industry expertise, technical expertise, entrepreneurial abilities, and prior entrepreneurial experience as four separate constructs.

The variable *use of guanxi kin for management or marketing expertise* also showed poor construct reliability. One potential explanation for this may be that the two measures used to create this construct, use of management and administrative expertise and marketing channel expertise, simply are not found that often in the same individual. Resource acquisition decisions made using relationship-based logic, like that employed with nuclear family or work colleagues, may overlook this fact and lead entrepreneurs to leverage the same trusted nuclear family member for both areas. Resource acquisition decisions made using capability-based logic may mean that one venture may use an extended (guanxi) kin member for management expertise, while another may use an extended (guanxi) kin member for marketing expertise, but rarely use the same individual for both – more often than not drawing this expertise from some other social capital source. It would be beneficial for future research to measure management expertise and marketing expertise as two separate constructs.

We concluded by laying out and testing a set of six hypotheses. We predicted that entrepreneurs would use nu-

clear family members for management or marketing expertise, but this would come fraught with strong emotions that can cloud judgment, leading to lower performance. This hypothesis was supported. We also predicted that using extended kin and close friends (guanxi kin) for industry, technical, or entrepreneurial expertise would give entrepreneurs access to individuals with a broad range of knowledge, leading to higher performance. This hypothesis was also supported. We further predicted that use of nuclear family members for industry, technical, or entrepreneurial expertise would not provide entrepreneurs with sufficient access to a broad knowledge and experience base, leading to lower performance. This hypothesis was not supported, partially due to the poor reliability for our measurement of this construct, as outlined above. We further predicted that use of guanxi kin for management or marketing expertise would give entrepreneurs access to dispassionate but engaged managers and marketeers who would make sound business decisions. This hypothesis was not supported in the main results but partially supported in the ad-hoc analysis, also due in part to the construct reliability issues described above. Finally, we predicted that using work colleagues for management or marketing expertise would lead to higher venture performance, while using those same colleagues for industry, technical, or entrepreneurial expertise would lead to lower performance. This was due to the strong bonds yet rational emotions of work colleagues, but the limited scope of their industry and entrepreneurial knowledge. These hypotheses were not supported. This may not be a reflection of the lack of impact made by work colleagues on a firm's fortunes, but rather a reflection of the outsized impact family ties has on a firm performance – both in positive and negative directions. This is in line with the contingency-oriented stream of research on family business performance to which this paper contributes.

Contributions to the Literature

While business strategy, organizational behavior, and general entrepreneurship scholars may be familiar with theories and studies suggesting the superior performance of non-family versus family firms, the reality of empirical results is actually pretty evenly mixed, with some studies showing superior performance by non-family firms and others showing superior performance by family firms (Dyer, 2018). Dyer (2018) recently suggested that scholars should address these mixed results by asking research questions that connect family firm performance to the heterogeneity of family businesses. In particular, Dyer suggested comparing traditional nuclear family structure to other structures such as a blended family. Our study suggests that the concept of family varies based on country and culture. As such intra-family interactions and norms will differ, thereby affecting firm performance in potentially different ways.

As discussed in Jasckiewicz and Dyer, (2017) many family science theories were developed in the Western world and may not generalize to other parts of the world. By utilizing a sample of Chinese family businesses, we highlight a key contextual difference in family firm performance that is unique to Chinese and maybe other collectivist cultures.

Specifically, our study adds the concept of *guanxi* as a form of family involvement that is related to firm performance. Unlike the western concept of kin, which is seen only as familial relations, Chinese kin consists of both extended family and close friends. The dynamic relationship we observed between *guanxi* and Chinese business performance begins to address an important call to action for research on heterogeneity of firms as it relates to differences in family interactions (Dyer, 2018; Jaskiewicz & Dyer, 2017).

Our study also begins to address Jaskiewicz and Dyer (2017) and Dyer's 2018 suggestion that family business research should account for characteristics of family interaction or communication patterns. Clearly, interactions between nuclear family and kin varies. Since Chinese business owners view close friends as part of their kinship circle, they are exposed to heterogeneous thought processes that may not exist when only consulting with familial relations. This is because familial relations have similar histories and are influenced by similar events and by people with similar ways of thinking. Therefore, Chinese owners who consult with "guanxi kin" are exposed to different ways of thinking and introduced to different forms of data to consider when making strategic decisions compared to business owners who consult with people of the traditional western view of kin or more importantly only with their nuclear family.

Practical Implications

The findings of this study have at least two important implications for business owners. Our findings provide a cautionary tale about the pitfalls of employing nuclear family members in the top management team for business owners. Our results also suggest that entrepreneurs who want to achieve higher employee growth and more satisfaction with their ventures would do well to tap into their networks of extended kin and close friends for industry, technical, and entrepreneurial expertise, which extends Lester and Cannella's (2006) view on the role of family and kinship networks.

Limitations

While our results are interesting and significant, our research has some limitations. Probably the foremost among these is the poor reliability of two of our constructs and the borderline reliability of the rest of them. While both our SEM and stepwise regression analyses of the data support several of our hypotheses, our results should be viewed as preliminary, rather than definitive.

A second limitation in the current research is lack of significance of the relationship between use of work colleagues and venture performance, regardless of whether those work colleagues were used for management or marketing expertise or for industry, technical, or entrepreneurial expertise. This result suggests that there are additional contingencies which act as moderators in determining

whether the value of work colleagues as human resources is activated.

Suggestions for Future Research

As outlined in the discussion section above, future research should measure the constructs of management expertise and marketing expertise separately. It should also measure the constructs of industry expertise, technical expertise, understanding of the entrepreneurial opportunity, and prior entrepreneurial experience separately and with survey questions more closely aligned with these constructs. Additionally, future research should collect a larger sample of data.

Future research should also measure more nuances of how both family and non-family human resources are used by entrepreneurs in their new ventures. This includes measuring whether or not these human resources were formally employed or simply consulted for advice, what the quality level of this work or advice was, the level and type of compensation offered, as well as the physical location of the human resources, communication technologies employed, and methods utilized to facilitate the working relationship between the entrepreneur and the people with whom they are cooperating. Finally, future research should focus on additional measures of firm performance and on samples in older and more established firms (not just new ventures) in cultural contexts beyond China.

CONCLUSION

This research began by exploring family businesses using a combination of resource dependence theory and the resource-based view of the firm as theoretical lenses. We noted that many firms acquire valuable, rare, and inimitable resources through their top managers. We suggested that utilizing nuclear family members to acquire resources may lead to certain types of lower venture performance, while utilizing extended kin and close friends (*guanxi kin*) may lead to certain types of higher performance. Our data provide evidence that supports these suggestions, with firms using nuclear family members for management or marketing expertise achieving lower employee growth and subjective assessment of success and firms using *guanxi kin* for industry, technical, or entrepreneurial expertise achieving higher levels of these same performance results. These results contribute to the growing body of literature focused on a contingency-oriented approach to family firm performance. We encourage our colleagues to join us in continuing inquiry into this promising line of research.

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