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The use of networks in human resource acquisition for entrepreneurial firms: Multiple "fit" considerations

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Abstract

This study proposes a multi-dimension, multi-contingent "fit" perspective for examining different practices adapted by entrepreneurial firms in acquiring human resources. We posit that while environmental constraints are important considerations for adapting recruitment practices through networks, strategic needs and interpersonal dynamics are the key drivers behind the evolution of such practices. As they transit from the startup to the growth phase, entrepreneurial firms utilize different network pools in search of diversity, yet cling to strong ties to find talents with common values and goals. Our findings carry important implications for future research in human resource management by integrating the macro- and micro-perspective, and at the same time, enhance the understanding of network effects and their strategic bearings in the entrepreneurial process, specifically in the acquisition of human resources.

Keywords: Human resource acquisition; Entrepreneurship; Developmental phase; Fit; Network effect

1. Executive summary

People are the key to organization competitiveness and the quality of core human resources in a firm impacts organizational growth and well-being. Understanding how

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organizations can acquire the right type of talents is therefore of prominent interest to organizational scholars and practitioners alike, which is why the notion of "fit" is a dominant theme in human resource literature. Yet what is "fit" is under constant debate. Integrating and extending extant literature on HRM and entrepreneurship, this paper proposes a multi-dimensional, multi-contingent fit model in examining how the practices adapted by entrepreneurial firms in acquiring their core talents may change during different developmental phases of the firm. The general proposition is that entrepreneurial firms adapt different network strategies in acquiring their core human resources at different stages due to multiple considerations of fit.

The overarching theoretical framework of our model is based on the "system approach" of contingency theory, stressing the interactions among multiple contingencies and structural characteristics in the organization system. Due to the lack of internal resources, including a well-structured HR system, entrepreneurial firms may not have the luxury of choosing a "buy" or "make" employment mode in accordance with their business strategies, as suggested in the mainstream HRM literature. Saddled with the liabilities of newness and smallness, the more relevant questions to entrepreneurial firms are "what to buy" and "how to buy", taking into account their needs and constraints.

Through examining how environmental constraints, strategic needs and interpersonal dynamics in entrepreneurial firms interact during different developmental phases, our study highlights some unique features in human resource acquisition in those firms. While recruitment through networks seems to be the predominant practice, the type of networks entrepreneurs tap in to acquire their core talents vary from a mixed pattern during the startup phase to an overwhelming reliance on business networks during the growth phase. Yet the use of strong ties in acquiring talents persisted during both phases. Our analysis of the contingents indicated that the change in the network pattern may be attributed to the need for different types of talents due to the changing environmental conditions and strategic needs of the firm; whereas the stability in tie strength may reflect the persistent emphasis on value and goal congruence when entrepreneurs choose their core team members.

Our findings carry important implications for future research in human resource management by integrating inter-personal, strategic and environmental considerations into the "fit" picture, thus bridging the invisible barrier between macro- and micro-HRM research. Our examination of the recruitment practices through networks, and how they change over time, enhances the understanding of network effects and their strategic bearings in the entrepreneurial process, specifically in the acquisition of human resources. Understanding the various factors affecting the "fit" dynamics of organizational practices may help entrepreneurs and managers in formulating strategies and making decisions in human resource acquisition.

2. Introduction

Literature on human resource practices in entrepreneurial firms is still relatively under-developed (Baron, 2003; Katz and Welbourne, 2002). This is unfortunate considering the significant contribution entrepreneurial firms make to our economy, and the importance of human resource in determining those firms' success or failure (Katz et al., 2000; Katz and Welbourne, 2002). Due to generally sparse human resource practices, recruitment and selection are considered as prominent HR functions (Hornsby and Kuratko, 1990) and the key components of overall effective management of a firm's human resources in entrepreneurial firms (Cardon, 2003). While several studies have examined recruiting and staffing issues in entrepreneurial firms (see Cardon and Stevens, 2004 for a comprehensive review), little has been done to examine the "fit" between the hiring practices and the changing contextual factors of the firm over different developmental stages (Heneman et al., 2000; Leung, 2003).

Addressing the research gap, this paper proposes a multi-dimensional, multi-contingent fit model in examining how changing contextual factors during different developmental phases of the firm may lead to changes of practices in acquiring core talents. Our overarching theoretical framework is the "system approach" of contingency theory which stresses the interactions among multiple contingencies and structural characteristics in the organization (Drazin and Van de Ven, 1985; Van de Ven and Drazin, 1985). Since we are venturing into a relatively unexplored field, the nature of this study is exploratory, focusing more on building a new theoretical perspective than on theory testing. Instead of trying to find additional evidence of the well-debated theme of "fit" and performance, we try to bring out the various factors organizations have to consider in trying to acquire talents with the right "fit".

3. Theoretical background and proposed conceptual framework

3.1. Extant "*fit*" literature in HRM research

The most frequently applied theory in the human resource literature addressing the "fit" issue in talent acquisition is the person–environment (P–E) fit (or P–O fit when applied to organizations) theory. The P–O fit framework argues that organizational behavior and effectiveness are ultimately a joint function of characteristics of the organizational environment and the individual (Kristof, 1996; Schneider et al., 2001). Empirical research for over a decade has provided strong support for the positive effects of P–O fit on individual work attitudes such as job satisfaction, organizational commitment, organizational citizenship behavior (OCB), task performance and turnover; and individual well-being (Schneider et al., 2001). Such findings are mainly based on bivariate or highly circumscribed multivariate relationships. For example, Chatman and colleagues focus on value and goal congruence in predicting job satisfaction and organizational commitment of individuals (Chatman, 1991; O'Reilly et al., 1991). Using the same measurements, Vandenberghe (1999) suggests that the congruence of individual values with organizational culture predicts turnover. However, in most of the P–O fit literature, the organizational context is very often represented by a set of static organizational characteristics for individuals to fit in, rather than dynamic factors which change with time. Organizational dynamics such as changes in institutional environment and strategic needs over time are rarely taken into consideration (Schneider et al., 1997; Schneider, 2001).

Strategic human resource management (SHRM) literature, on the other hand, focuses almost exclusively on how human resource practices can "fit" organizational strategies in generating the necessary human capital pool to sustain superior performance (Barney and Wreight, 1998; Wright et al., 2001). The key argument under this stream of literature is that a "fit" between strategy and HRM system of the organization will result in sustainable competitive advantage based on its unique human capital, thus resulting in superior organizational performance. The "make" or "buy" employment modes are mapped with different types of organizational strategies based on Miles and Snow's typologies, from prospectors to defenders (Miles and Snow, 1978, 1984). "Make" oriented organizations primarily hire at entry level, and develop employees within the internal labor market, while "buy" oriented organizations acquire needed skills from the open market (Delery and Doty, 1996; Heneman et al., 1994). Amidst the contradictory empirical findings of the type of strategy to map with each employment mode, Lepak and Snell (1999, 2002) proposed that there can be multiple employment modes within the same organization, depending on the type of employees and their roles in the organization. However, both the strategy–practice fit and the human capital–practice fit approaches argue at a broad conceptual level that a certain set of HR practices will suit a specific strategic orientation of the firm. How organizations may have to take into consideration factors other than competitive strategies in formulating their HR practices is seldom touched.

3.2. Unique challenges on human resource acquisition for entrepreneurial firms

Defined as young, small, and growing (Baker and Aldrich, 2000; Markman and Baron, 2002), *entrepreneurial firms* in general are saddled with the "liabilities of newness and smallness" (Aldrich and Auster, 1986; Ranger-Moore, 1997; Stinchcombe, 1965). They may not have the abundant resources at their disposal as in large, established firms. The organizational practices they adapt are more often than not the result of "improvisation" (Baker and Aldrich, 2000) and "effectuation" (Sarasvathy, 2001). Instead of having the choice of various means to achieve a specific goal, entrepreneurial firms usually have to "make do" with the limited resources they have in hand to attain the best outcomes they can get (Sarasvathy, 2001). With regard to hiring practices, the mainstream "make" or "buy" option in the HRM literature may not be applicable to these firms. Since entrepreneurial firms, in general, do not have the HRM system and the organizational resources to provide internal training and career development (Katz et al., 2000), adapting the "internal system" of staffing is seldom an option. The "market system" is deemed to be more appropriate (Cardon, 2003; Delery and Doty, 1996; Heneman and Tansky, 2002). However, recruiting "strangers" from the market is an enormous challenge to entrepreneurial firms with their highly uncertain future, and a general lack of resources and organizational reputation (Williamson, 2000; Williamson et al., 2002). Entrepreneurial firms may have to enact unique strategies and practices to overcome such environmental constraints (Williamson et al., 2002). Therefore, in considering the overall "fit" picture in human resources acquisition in entrepreneurial firms, we need to incorporate these environmental contingents into the equation.

3.3. Towards a "system approach" of fit

Each stream of the literature reviewed above represents one dimension of fit consideration in the process of human resource acquisition: how different individual characteristics may fit into different organizational settings (P–O fit); how different business strategies may need different HRM systems (strategic fit); and how different HRM practices may be an outcome of the environmental constraints firms face (environmental fit). While each stream of the extant literature provides a unique angle for our understanding of the rationales for a specific set of human resource practices, a holistic integration of such dimensions is yet to be developed.

Underlying the contingency approach is the proposition that performance is a consequence of the "fit", or congruence, between several factors: structure, people, technology, strategy, and culture (Nightingale and Toulouse, 1977; Tosi and Slocum, 1984; Van de Ven and Drazin, 1985); although the traditional contingency approach applied in strategic management, organizational theory and organizational behavior studies rarely examine "fit" at such a "system" level (Drazin and Van de Ven, 1985). However, the "system approach" of contingency theory is arguably a more realistic representation of organizational reality (Drazin and Van de Ven, 1985; Miller, 1981). Under this approach, fit is defined as "the internal consistency of multiple contingencies and multiple structural characteristics" (Drazin and Van de Ven, 1985, p. 515). Such an approach advocates the simultaneous consideration of the interaction among environmental, strategic and people variables within a certain structure (Miller, 1981; Van de Ven and Drazin, 1985).

Adapting the "system approach", we propose a multi-dimensional, multi-contingent model of "fit" to examine why recruitment through networks (RTN) becomes the most commonly adapted practice among entrepreneurial firms. Our model suggests that environmental, strategic and inter-personal considerations all play a part in influencing the hiring practices for core talents in entrepreneurial firms. The contingents in these multiple dimensions change as firms evolve from their startup to their growth phase. As a result, although firms may persistently rely on network ties to recruit talents, the network ties utilized may vary with changing organizational context represented by the two different developmental phases. In this study, the *startup phase* is defined as the inception and survival stages of the firm, and the transition to the *growth phase* is signified by the emergence of a clear growth strategy, followed by consecutive years of rapid growth (Churchill and Lewis, 1983; Hanks et al., 1993; Hite and Hesterly, 2001). Fig. 1 summarizes our conceptual framework.

3.3.1. Environmental fit — hiring practice as a response to environmental constraints

Liabilities of newness and smallness are generally quoted as the main constraining factors for entrepreneurial firms to compete in the talent market (Cardon and Stevens, 2004; Williamson, 2000; Williamson et al., 2002). Such liabilities are manifested in the lack of financial and material resources (Hannan and Freeman, 1984), the lack of organizational legitimacy (Williamson, 2000) and a high level of uncertainty (Gartner et al., 1992). The lack of financial resources may hamper entrepreneurial firms' ability to offer attractive remuneration packages. Resource constraints also cause them

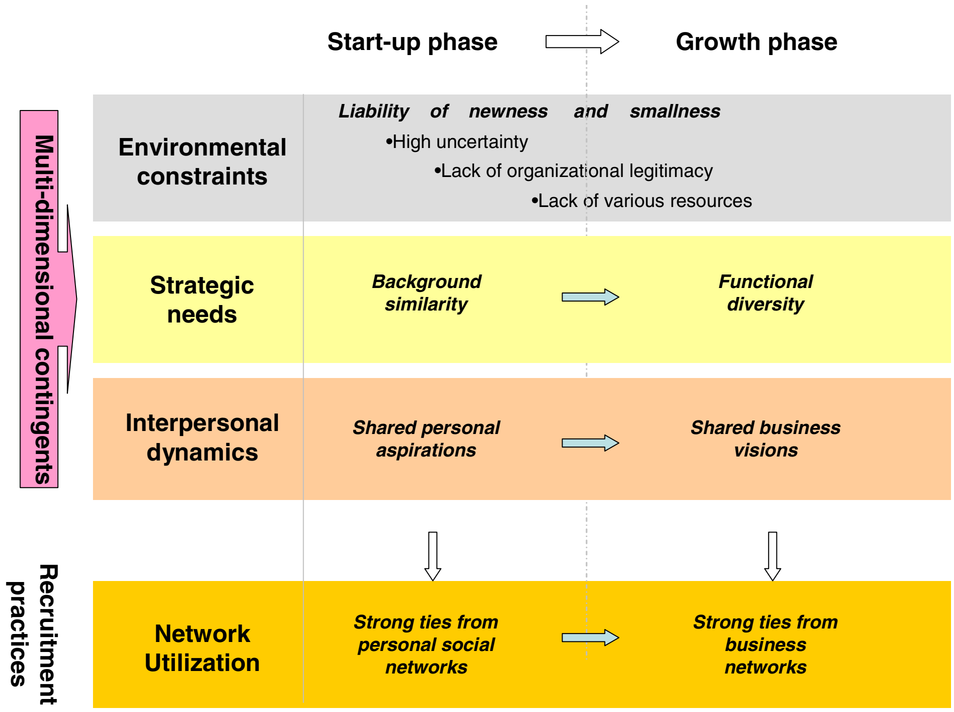

Fig. 1. A multi-dimensional framework of fit considerations in hiring.

to shy away from investment-intensive methods such as college recruitment (Barber et al., 1999). Unlike established firms, entrepreneurial firms often cannot rely on their name, their reputation, or their market share to attract talents (Aldrich, 1999). The HR function is also limited in smaller firms. In addition to their other roles, owners or line management have to recruit staff and they are less likely to employ sophisticated recruitment and selection programs (Barber et al., 1999; Heneman and Berkley, 1999). The deviation from institutionalized recruitment practices, together with the general absence of well-defined job descriptions for positions, reduce entrepreneurial firms' legitimacy as employers-of-choice (Williamson, 2000). From the potential recruit's perspective, committing one's career to a relatively young and small firm can be a high-risk undertaking due to the relatively high mortality rate of firms at their early and adolescence stages (Bruderl and Schussler, 1990; Hannan and Freeman, 1989).

Proposition 1a. *Liabilities of newness and smallness are the key environmental constraints faced by entrepreneurial firms in human resource acquisition.*

Extant literature on staffing practices in entrepreneurial firms suggests that informal recruitment practices through networks generally prevail in such firms (Aldrich, 1999; Aldrich and Langton, 1997; Barber et al., 1999). RTN provide a "convenient and inexpensive" way of acquiring talents (Barber et al., 1999). Network recruitment may also help to address the issue of organizational legitimacy. Through networks, potential employees can obtain private information on the firm (Shane and Cable, 2002), thus becoming more open to consider joining the firm. Similarly, individuals with existing ties to entrepreneurs are more likely than strangers to join ventures operating in highly uncertain conditions (Hite and Hesterly, 2001; Uzzi, 1996). More importantly, in the absence of sophisticated selection processes, using networks in recruitment and selection will help achieve better “fit”, be it personality, ability or attitude (Brass, 1995, p. 52 and 62–63). Therefore, we can see the pragmatic as well as strategic rationales in entrepreneurial firms adapting recruitment practices through networks.

As entrepreneurial firms transit from the startup phase to the growth phase, however, we can expect an improvement in resource availability as their businesses grew to a sustainable size. The establishment of a certain track record also improves their organizational legitimacy. At this stage, there should also be a reduction in the degree of uncertainty since the firms have moved beyond survival to growth (Hite and Hesterly, 2001). Such improvements, together with the need for expanding the core team to cope with the growth pace, may steer entrepreneurial firms to turn more to the market for talents (Cardon, 2003; Williamson, 2000), reducing the reliance on RTN.

Proposition 1b. *Recruitment through networks is the predominant practice in acquiring human resource in entrepreneurial firms, although the extent of its predominance will decrease during the growth phase.*

3.3.2. Strategic fit — meeting strategic needs through hiring practices

During the startup phase, organizational structure is relatively simple, and the owner/manager is synonymous with the business, with highly centralized decision-making authority. The focus of the firm at this phase is to turn identified opportunities into viable business, and to survive with limited resources. Fast decision making and actions are imperative. Schneider et al. (1997), quoting from Miller’s work (1991) suggested that homogeneity in the management team at this early phase can bring about the cohesiveness and cooperation required to achieve those short-term goals. In their study of new venture teams, Chandler and Hanks (1998) also found that shared background and interests, rather than functional diversity, tend to be the predominant selection criteria for team members at this stage.

As the firm transits to the growth phase, its strategic focus shifts from short term survival to longer term growth and sustainability. As business size grows, and business demands become more intense and diversified, entrepreneurs need to decide what tasks they focus on to bring about maximum benefits for the organization, and delegate other roles (Johnson and Bishop, 2002). Gradually, as the organizational structure shifts from an owner-run firm to professional management with increased specialization, diversity of skills becomes necessary (Churchill and Lewis, 1983; Hanks et al., 1993). Chandler and Hanks (1998) found that the development of distinctive functional area competencies by team members is associated with sales growth performance as firms go beyond their founding years. Management heterogeneity facilitates growth and organizational transition, in that it increases the knowledge and perspectives available to the core team, enabling the team to go into issues more deeply and develop a more complete understanding of problems, and develop alternative solutions to these problems (Foo et al., 2005; Pelled et al., 1999). Debates among team members based on their different perspectives lead to increased decision comprehensiveness, and are particularly important in situations characterized by change and uncertainty (Eisenhardt, 1989b; Simons et al., 1999).

Proposition 2a. *Contingent on the strategic needs of the firm, entrepreneurs stress background similarity during the startup phase and functional diversity during the growth phase in acquiring their core team members.*

Personal social networks, in general, comprise families, kin, friends and other affiliations through various social interactions (Dubini and Aldrich, 1991). Apart from family members, individuals are also more likely to affiliate themselves and share similar values with people from similar socioeconomic backgrounds (Aldrich, 1999; Schneider et al., 1998). Therefore, a focus on background similarity may be achieved through hiring from the personal social networks of the entrepreneurs. To tap into more diverse talents during the growth phase, however, entrepreneurs may need to reach beyond their own social circles (Aldrich, 1999) and seek people who are dissimilar to themselves. *Business networks* established during the process of building up the firm, be that with suppliers, customers or service providers, form a rich pool for entrepreneurial firms to search for people with diverse backgrounds and perspectives (Leung, 2003). For example, professional managers from larger corporations may possess very different backgrounds and perspectives from entrepreneurs (Busenitz and Barney, 1997), and such people can become the source of diversity for entrepreneurial firms at the growth phase.

Proposition 2b. *The network ties utilized in acquiring core team members evolve from personal social ties during the startup phase to business related ties during the growth phase of the firm.*

3.3.3. Inter-personal fit — screening for the right "type" of people with hiring practices

Utilizing different network pools to search for talents in accordance with varying strategic needs does not automatically translate into getting people with the "right fit". The essence of person–organization fit lies in value and goal congruence between the person and the organization (Chatman, 1989; Kristof, 1996), within which the "fit" content may also change over time (Schneider et al., 1997). Empirical studies have found that during the startup phase of new firms, entrepreneurs make recruitment decisions based mainly on the mutual compelling interests among team members or their common aspirations to start a venture (Chandler and Hanks, 1998; Kamm and Nurick, 1993). Rather than just having a clear business vision as a common ground, entrepreneurs and their team members are being drawn to each other based on similar beliefs, interests, and personal chemistry (Bird, 1988). As firms move to the growth phase, business vision and strategic goals become more well-defined and stable (Churchill and Lewis, 1983). From the P–O fit perspective, during this phase entrepreneurial firms need to have members with diverse perspectives and complementary competencies and also members who share the vision of the organization. This mix of complementary competencies and shared vision facilitate effective communications and execution of organizational tasks (Schneider et al., 1997).

Proposition 3a. *For value and goal congruence, entrepreneurs tend to seek talents with shared personal aspirations in the startup phase and with shared business visions during the growth phase of the firm.*

To identify people who share similar values requires a prolonged period of repeated interactions between the parties concerned (Jones and George, 1998). The key elements during the process are the exchanges of knowledge and information. Values are manifested through strings of consistent attitudes and behaviors over time, and the information used in the judgment is tacit rather than explicit. Uzzi (1996) suggested that embedded ties are more effective in transferring fine-grained, tacit information. Therefore, in the context of hiring core team members, we expect the preference for direct, strong ties to persist through the startup phase to the growth phase of entrepreneurial firms.

Relying on strong ties does not necessarily limit the diversity of information and competencies entrepreneurial firms need, especially for their growth phase. It is probable that, if we consider only personal networks, strong ties tend to breed homogeneity, since such ties tend to link people with similar background and perspectives together (Aldrich, 1999, p. 82). However, during the course of building up their businesses, entrepreneurs are likely to come across business counterparts who are different from themselves. For example, professional managers from larger corporations are very different from entrepreneurs (Busenitz and Barney, 1997). They come into contact with entrepreneurial firms mainly through business relationships as customers, suppliers, and resource or service providers. Entrepreneurs may form strong ties with some of these business associates through repeated interactions over a prolonged period of time. These business associates may also come to understand and share the firms' business visions. Having them on board provides the diversity of perspectives and competencies entrepreneurial firms need for facilitating growth. The networks of such people may in turn bring in diverse information which is not obtainable through the entrepreneurs' personal networks, performing the structural-hole function for entrepreneurial firms (Bian and Ang, 1997; Burt, 1992).

Proposition 3b. *The network ties utilized in recruiting core team members are likely to be strong ties at both the startup phase and the growth phase of the firm.*

4. Methodology

4.1. Samples and data collection

Since this was an exploratory study on why and how entrepreneurial firms might come to adapt different types of networks in acquiring their human resources, a case study approach was used (Yin, 1984). A multiple-case study approach and a "theory-based" sampling design (Chandler and Hanks, 1998; Yin, 1984) were adopted to allow replication within the same group and comparison across groups. Data were collected from two cohorts of 10 entrepreneurial firms each, through interviews with the owner-managers. The first cohort consisted of firms between 2 and 3 years old at the time of the interview. The second cohort consisted of firms between 6 and 30 years old, with an average age of 16.7 years. With the first group, we captured the recruitment of initial team members other than the founders. With the second group, we captured data on how they recruited their core team members during both the startup and the growth phases. Data from the first group acted as a validity check on the retrospective data collected from the second group on their recruitment practices during the startup phase, since entrepreneurs from older firms might be recollecting events that happened 10 to 20 years ago. The second group of firms allowed us to collect data that captured the transition from the startup phase to the growth phase. Our sample firms came from a wide range of industries including manufacturers of food products, printed products, mechanical tooling, and electronic components; internet service providers, software developers, trading companies, and pet stores (services and products).

The bulk of the interviews were conducted between the periods of mid-2002 to mid-2003, with some follow-up interviews conducted in 2004. A combination of open-ended and structured questions was used. The length of the interviews ranged from 45 min to 90 min. Before the questionnaires were administered, the concepts of core team members (for both cohorts) and the differentiation between the startup and the growth phases (for the second cohort only) were explained to the entrepreneurs. With reference to the definitions of top management team and core talents (Hambrick and Mason, 1984; Lepak and Snell, 1999), we defined *core team members* as people who hold key positions in the company and are involved in the company's management and strategic decision process. For the *transition from the startup to the growth phase*, we used four contingents from the stage-model literature (Churchill and Lewis, 1983; Hanks et al., 1993; Smith et al., 1985) to identify the dividing line between the startup and the growth phases: the formation of a clearly articulated growth strategy, additional capital injection, expansion of the general work force and the core team, rapid positive growth for the 3 years after transition. Entrepreneurs made their own decisions on the transition point based on one or more of the dimensions.

The open-ended questions aimed to capture the contingents leading to the adaptation of the recruitment practices through networks, and the structured questions helped trace the channels the owner–manager used to recruit their core team members, and the characteristics of the ties used. A total of 71 hires were captured from the two cohorts of firms, 33 from the startup phase and 38 from the growth phase.

4.2. Measures of key concepts and data analysis

Our study adopted the strategy of building pre-defined constructs and propositions based on existing literature, as recommended by Yin (1984, p. 100–101) and Eisenhardt (1989a, p. 536). Such an approach provides a well-defined focus when we go into organizations, facilitating the systematic collection of specific kind of data. The constructs and propositions also serve as guides for data analysis along clearly defined theoretical ground.

In line with the definitions for core concepts used in this paper, various contingents affecting the choice of recruitment practices were categorized through theme coding of the transcripts for testing Propositions 1a, 2a and 3a. *Liabilities of newness and smallness* was coded when entrepreneurs referred to uncertainty (or risky, unpredictable environment), the lack of organizational legitimacy (e.g., reputation, recognition, and track record), and the lack of financial, organizational and material resources. *Similarity in background* or *functional diversity* were coded with reference to the demographics of the recruits, and *shared personal aspirations* or *shared business vision* were coded when entrepreneurs referred to dreams and passion or shared view point on business and identification with firm's goals as reasons for choosing a certain member.

For data analysis, we took the steps recommended by Yin (1984) and Eisenhardt (1989a) to conduct both within-case analysis and cross-case pattern searching. The transcript from each single firm was analyzed, noting all the contingents related to the use of different recruitment channels, and then sorted by the pre-defined themes. Repeat occurrences of any emergent themes, as in the case of trust and attitude, were also noted and categorized. Coupled with within-case analysis, we searched for repeated patterns among the same group of firms, and for similarities and/or differences across groups (startup firms versus growth firms) based on the dimensions we established from existing literature. Themes were considered established only if there were multiple occurrences within and across cases, reducing to a certain extent the danger of reaching false conclusions based on isolated evidence and information process biases (Eisenhardt, 1989a, p. 540). Quotations that were representative of the generated themes were then selected to "add voice" to our text (Wolcott, 1990), as reported in our findings. The matching of proposed themes at the proposed developmental phase (startup or growth) was the basis for supporting our propositions.

For coding, data analysis and testing of Propositions 1b, 2b and 3b, we relied mainly on numerical tabulation based on pre-defined variables and measures to capture patterns and relationships between variables, combining qualitative coding and quantitative analyses (Bettenhausen and Murnighan, 1985). Hires in the startup phase and hires in the growth phase were grouped into two separate groups. Recruitment channels were coded into four categories, i.e., recruitment through social ties, recruitment through business ties, internal promotion, and recruitment from the open market. Recruitment through social ties was coded when the recruit was (or was introduced by) a family member or a friend; a schoolmate or an acquaintance from social activities. Recruitment through business ties was coded when the recruit was (or was introduced by) a business associate (e.g., supplier, customer, service provider of the firm, or former colleague). Internal promotion was coded when the position was filled by an existing employee. Recruitment from the open market was coded when the person was a stranger recruited through job advertisement, employment agency, etc. Three commonly used measures for tie strength are duration of the relationship, intimacy of the relationship, and frequency of interaction (Brass, 1995; Burt and Knez, 1995). In this paper, the strength of ties was coded into dichotomies of strong (coded as 1) and weak ties (coded as 0) utilizing two of the three measures developed by Burt and Knez (1995). The two items capturing the duration of the relationship (How many years have you known each other before the recruitment?) and intimacy level of the relationship (To what extent do you agree that you keep a close relationship with each other prior to the recruitment?) were used as guidelines to code tie strength. The third item concerning meeting frequency was dropped due to the high possibility of recall error for such a detail. Prior studies have revealed a high correlation between frequency and closeness (Hansen, 1999), hence we do not expect the omission to affect the assessment of tie strength. Following Granovetter's (1973) definition, indirect ties were classified as weak ties. Some examples coded as indirect weak ties are:

> *He was a former acquaintance introduced by a friend — weak social tie* (G2-250503); *He came to sell us leased lines — weak business tie. (G1-090402)*

Multi-dimensional χ^2 tests were used to test Propositions 1b, 2b and 3b. The first χ^2 test differentiated RTN (social and business ties) and other recruitment channels. The second differentiated the types of networks used among the positions recruited through networks, and the third tested the strength of ties used in the two groups of positions hired during the startup and the growth phase.

5. Findings

As predicted in Proposition 1a, the "liability of newness and smallness" was mentioned as a key constraint in attracting people by entrepreneurs from both groups:

> *Most of the good technical resources (talents) who are home grown in Singapore don't really want to work for small companies like ours (young and small with high risk of failure). They prefer MNCs or large local companies. (G1-200602)*[1]

> *In competing with more established employers for talents, we sometimes can't afford to match their salaries. (G2-050602)*

> *The point is that you also have to build your company to a certain size to be able to attract people to join you. When the company is very small, people look at the company, they don't see a career path. They will never come. But when your company starts to grow, and you've got a good vision, they get to know you, then they will say, "hey this company will grow, and I want to be part of this growth". (G2-250703)*

The results of the multi-dimensional χ^2 test (Table 1) conducted on the two groups of positions with regard to their recruitment channels supported Proposition 1b. Of the total number of hires in both the startup and the growth phases, 76.1% were through networks. While there was a significant difference between the two groups of hires in the different phases ($\chi^2=4.732$, $p=0.015$), RTN was the predominant trend in both (87.9% during the

[1] The reference code for the quotations are created as follows: G1 or G2 represent the two cohorts of firms at the startup and the growth phase, followed by the interview date.

Table 1
Multi-dimensional χ^2 test for recruitment channels for positions

Growth phases * recruitment channels cross-tabulation

			Recruitment channels		Total
			Other recruitment channels	Recruitment through networks	
Growth phases	Startup phase	Count	4	29	33
		Expected count	7.9	25.1	33.0
		% Within growth phases	12.1%	87.9%	100.0%
		% Within recruitment channels	23.5%	53.7%	46.5%
		% of Total	5.6%	40.8%	46.5%
	Growth phase	Count	13	25	38
		Expected count	9.1	28.9	38.0
		% Within growth phases	34.2%	65.8%	100.0%
		% Within recruitment channels	76.5%	46.3%	53.5%
		% of Total	18.3%	35.2%	53.5%
Total		Count	17	54	71
		Expected count	17.0	54.0	71.0
		% Within growth phases	23.9%	76.1%	100.0%
		% Within recruitment channels	100.0%	100.0%	100.0%
		% of Total	23.9%	76.1%	100.0%

$N=71$, $\chi^2=4.73$, $df=1$, $p=0.015$.

startup phase, and 65.8% during the growth phase). However, the reliance on RTN decreased in the growth phase relative to the startup phase.

Propositions 2a and 3a were closely related and were often mentioned together during our conversations with the entrepreneurs. Consistent with our predictions, firms at the startup phase focussed more on similarity in background for team members, than on functional qualifications. This was closely linked to a preference for people who had shared personal aspirations and values with the entrepreneurs:

> *Either they are friends that I know for many years or a friend's friend who have known one another for many years. So, there is (a) certain bond and confidence in one another. (G1-090902)*

> *. . . even if the person has very good qualifications or lots of experience, it doesn't mean that the person can work with me. I think the chemistry is very important, whether they can work with me, whether they can work with their colleagues, whether they find that the office is right for them, I think that is very important. I choose my partners from previous colleagues. They know me very well — my management skill and my background. Me too. We need a cohesive team to work together and overcome the difficulties together, not blame each other. (G2-140703)*

> *Of course they don't know the technology in detail, so I have to train them up. That's why I put them at the middle (level). . . . So, last three years we trained them up, they are the best persons. . . . (In contrast) those guys who are looking at the money,*

> *although they have a strong technology background, are not welcomed. (This is) because those startup (members) have to suffer together in the process of the company growth. (G2-120602)*

At the growth phase, however, entrepreneurs tended to make their recruitment choices based more on complementary competencies than on a common background:

> *We have to ask ourselves why this person will benefit the organization. . . . So it's not just because he's a friend or that we have known each other for 10 years. No, it's more than that. It's more because we knew him or her, we knew that he has the particular knowledge or function that we want him or her to fill. That's why we offered to do this job together. (G2-310502)*

> *I needed him because he was from a multinational company. . . . As a company moving into the international market, we needed someone with multinational experience to help us manage the firm. Without that, we could not go to another level. I had only worked as an employee for seven months. It was quite difficult for me to spearhead the company's internationalization. (G2-140703)*

> *He had over 20 years with an American MNC. I take him in because he has certain ideas and certain expertise that I think he can share with us — what he had learned from the MNC. One of the weaknesses of (a) smaller company is that we do not have proper procedures and systems. This director has some ideas how we can go about to do (doing) that. I feel that it is the right time to bring in some people who give you some new ideas to organize the company, experienced people rather than young people. He was being laid off, and I brought him in to give the company some new ideas. (G2-210307)*

Competency match alone is not sufficient. The core people who joined the firm during the growth phase also need to identify with the company's vision. Professional managers joined the firm because they could see where the company was going, not just because they believed in the entrepreneur:

> *These people have worked with me before. They have a feel for what the company is like. They know the direction of the company. They know the vision. And I believe because of all these, they stay very motivated. And they are confident in how things will be done. (G2-250703)*

> *Before they join your company, they already obtained an understanding of your product, not just based on knowing me. They do not join the company because they have faith on (in) me. They know my character, they also know the recognition of the company and its products in the market, then, they join. (G2–140703)*

Propositions 2a and 3a were therefore generally supported.

The results of the multi-dimensional χ^2 test (Table 2) conducted on the positions hired through networks during the startup and the growth phase revealed that while there was a distinctive difference in the patterns of network ties used in hiring during the two phases ($\chi^2 = 11.653$, $p < 0.001$), there was not a clear trend that social networks were the preferred

Table 2
Multi-dimensional χ^2 test for types of networks used in hiring

Growth phases * types of network cross-tabulation

			Types of networks		Total
			Social networks	Business networks	
Growth phases	Startup phase	Count	13	16	29
		Expected count	7.5	21.5	29.0
		% Within growth phases	44.8%	55.2%	100.0%
		% Within types of networks	92.9%	40.0%	53.7%
		% of Total	24.1%	29.6%	53.7%
	Growth phase	Count	1	24	25
		Expected count	6.5	18.5	25.0
		% Within growth phases	4.0%	96.0%	100.0%
		% Within types of networks	7.1%	60.0%	46.3%
		% of Total	1.9%	44.4%	46.3%
Total		Count	14	40	54
		Expected count	14.0	40.0	54.0
		% Within growth phases	25.9%	74.1%	100.0%
		% Within types of networks	100.0%	100.0%	100.0%
		% of Total	25.9%	74.1%	100.0%

$N=54$, $\chi^2=11.653$, $df=1$, $p<0.001$.

channels of recruitment during the startup phase. Rather, in absolute numbers, business ties seemed to be more frequently used than social ties (16 vs. 13). However, a separate χ^2 test on the positions recruited through networks during the startup phase showed no distinctive preference between social and business networks ($\chi^2=0.310$, $p=0.577$). A validity check on positions hired during the startup phase in the first and second cohort of firms showed no significant difference in recruitment channels used between the two groups of firms ($\chi^2=0.214$, $p=0.519$).

The mixed network pattern used during the startup phase may be interpreted from the angles of availability and preference. In many cases, family members or friends might not be available, or were unwilling to take up positions in the startups (Aldrich and Langton, 1997). They might be holding positions with more established firms and were reluctant to make the move:

> *When my account manager resigned, I asked if she (my niece) can do the account. She worked for HL (an established financial company). She said HL is better.... I even talked to my classmates, university classmates ...at least four or five of them: "please come and join me, I need someone to help". He came (a university classmate), he came alone. (G1-120602)*

In such cases, entrepreneurs may have no choice but to utilize whatever other channels available to them in line with the "improvisation" and "effectuation" theory of the entrepreneurial process (Baker and Aldrich, 2000; Sarasvathy, 2001). On the other hand, some entrepreneurs might not want to hire from their social circle when they had a choice:

> *I do not believe in running the business with family members. I believe in getting outsiders. (G2-250503)*

I seldom take friends' recommendations. I try to avoid (that because) there will be a lot of power and politics problems. If you want to fire him, (someone hired) based on a friend's recommendation, (it) can be a lot of problems. No family members. Also, staff's family members cannot be here. (G2-140703)

It is difficult to do business with family members — emotions tend to get in the way. A lot of people run the company with family management. It does not work. Having close friends working with you is the same thing. Better remain as good friends (than mixing friendship and business together). (G2-250703)

During the growth phase, the network utilization pattern was much clearer. Of the 25 hired through networks, 24 (96%) were from business networks. Proposition 2b was partially supported.

The multi-dimensional χ^2 test on positions recruited through networks and tie strength (Table 3) showed no significant difference between the startup and the growth phase ($\chi^2 = 0.207$, $p = 0.325$). There seemed to be a tendency towards strong ties for both phase (62.1% of the hires during the startup phase, and 68% of the hires during the growth phase were strong ties). A separate χ^2 test on hires through strong ties showed no significant difference between the two phases ($\chi^2 = 0.029$, $p = 0.866$). Proposition 3b, with regard to the strength of ties utilized in RTN, was supported.

On top of the themes of shared personal values or business vision, additional themes captured from dialogues with the entrepreneurs provided further explanation as to why strong ties were generally preferred. One emerging theme was the issue of trust. From firms at the startup phase, we hear repeated references to the importance of trust:

For those people we know, we know what we can expect and what they can deliver. (G1-080402)

I think that (trust) is the most important.... You must at least get people who are competent. But he may not be aligned with you. He may not have the commitment, and ask why he must work so hard. (G1-110902)

From firms at the growth phase, emphasis on trust is apparent:

So, there is trust, you can trust him. We knew each other (through working as counterparts for 10 years). (There was) no need to go through the process of building up trust.... Trusting the person means trusting him to manage for the company... (If) you believe the person has the sense of responsibility to do the job well, has the ability, then you give him the job. (G2-140703)

When I talk to people in the interview, I must feel that I am confident in the person, and can trust him. I believe that if you cannot trust a person, do not hire him. (G2-210703)

Another emerging theme closely related to trust was the stress on attitude:

In business, I still think the attitude is more important than qualification(s). (G1-110902)

Table 3
Multi-dimensional χ^2 test on strength of ties used in hiring

Growth phases * tie strength cross-tabulation

			Tie strength		Total
			Weak	Strong	
Growth phases	Startup phase	Count	11	18	29
		Expected count	10.2	18.8	29.0
		% Within growth phases	37.9%	62.1%	100.0%
		% Within tie strength	57.9%	51.4%	53.7%
		% of Total	20.4%	33.3%	53.7%
	Growth phase	Count	8	17	25
		Expected count	8.8	16.2	25.0
		% Within growth phases	32.0%	68.0%	100.0%
		% Within tie strength	42.1%	48.6%	46.3%
		% of Total	14.8%	31.5%	46.3%
Total		Count	19	35	54
		Expected count	19.0	35.0	54.0
		% Within growth phases	35.2%	64.8%	100.0%
		% Within tie strength	100.0%	100.0%	100.0%
		% of Total	35.2%	64.8%	100.0%

$N=54$, $\chi^2=0.207$, $df=1$, $p=0.325$.

> *Experience is not important.... If the basic attitude of the person is right, can be trusted, keen to learn, he can overcome the handicaps. (G2-210703)*

Judgment of both trustworthiness and attitude required fine-grained information transfer, which is best achieved through the utilization of strong ties (Krackhardt, 1992; Uzzi, 1996). Therefore, entrepreneurs who are looking for such qualities in their core team members will lean towards strong ties.

6. Discussion

In this study, we explored multiple "fit" considerations linking RTN practices, and their evolution over different phases of organizational development, to the changing environmental, organizational and interpersonal dynamics of entrepreneurial firms. Our findings support our general proposition that entrepreneurial firms adapt different network strategies in acquiring their core human resources at different developmental phases due to multiple considerations of fit. Our effort represents an initial attempt to adapt a "system approach" of contingency theory (Miller, 1981; Van de Ven and Drazin, 1985) to understand the underlying dynamics of HR practices.

6.1. Implications

Mainstream HRM literature suggests that organizations should choose between "buy" (market system) or "make" (internal system) for their HRM practices contingent on the type of business strategies adopted (e.g., Delery and Doty, 1996; Miles and Snow, 1984).

Our study suggests that, due to their specific needs and constraints, the strategic choices entrepreneurial firms need to make with regard to their HRM practices is "how to buy" the right types of talents they need at different developmental phases of the firm with the means available to them. Specifically, they "buy" from social and business networks during the startup phase, and "buy" almost exclusively from business networks during the growth phase. Such an understanding highlights the need to study human resource practices in entrepreneurial firms in their specific context.

Our examination of the recruitment practices through networks, and how they change over time, enhances the understanding of network effects in the entrepreneurial process, specifically in the acquisition of human resources. Extant studies on the utilization of networks in resource acquisition by entrepreneurial firms seem to suggest that strong ties contribute more to firm survival, and weak ties are more important in facilitating growth (Bruderl and Preisendorfre, 1998; Hite and Hesterly, 2001; Stearns, 1996). While such studies have solid theoretical ground in the strength of weak ties theory (Granovetter, 1973) and structure-holes theory (Burt, 1992), our findings suggest that the use of strong ties in acquiring core team members persists throughout the startup and the growth phases of the firm. We bring additional insights to the debate on the effects of strong/weak ties by showing that, instead of switching from strong ties to weak ties to achieve diversity in perspectives and competencies, entrepreneurial firms shift from personal social networks to business networks. This is consistent with the concept of stability versus change when studying network effects and organizational transition (Burkhardt and Brass, 1990). While shifting their network pool in search of talents with diverse competencies, entrepreneurs cling to strong ties to find talents who are different from themselves, and yet still share certain common ground and values.

On the practical front, our study broadens the understanding of recruitment practices of entrepreneurial firms. The limited literature on the topic thus far focuses more on what the practices are, rather than on why such practices are employed. By taking a "system approach" in examining how network recruitment practices of entrepreneurial firms emerge and evolve, this study highlights the importance of strategic alignments among multiple contexts and practices. Such an understanding is of reference value for strategic decisions of entrepreneurial firms on human resource acquisition. Decision-makers need to be conscious of the multiple fit dynamics in considering what type of people they need and how they are going to get them.

Specifically, our study suggests that entrepreneurs, in seeking people to join their firms, may utilize strong ties during both the startup and growth phases. These strong ties could come from a mix of business and social networks in the startup phase and from business networks in the growth phase. Such findings may have certain implications for job seekers as well. While Granovetter's study (1974) suggests that weak ties lead to better job prospects for managers, professionals and technical positions, our findings suggest that to become a core member in an entrepreneurial firm, more direct relationships (either in a business or social context) may have to be established before one will be considered for the job.

6.2. Limitations and future research

Given that this is an exploratory study done on a small sample of entrepreneurial firms, we need to be cautious in generalizing the findings. While the main purpose of this study is to build new theoretical perspectives, further studies with more robust research designs are needed to validate our propositions. The retrospective longitudinal approach employed in this study also has its limitations. Entrepreneurs may have cognitive and perceptual limitations that reduce the validity and reliability of their retrospective accounts (Chandler and Lyon, 2001). We have taken measures to improve validity by comparing the retrospective data from firms at the growth phase with those collected from a separate cohort of startup firms. Nevertheless, longitudinal panel studies should be conducted in the future to validate our findings.

Collecting multi-dimensional data from a single informant also has its inherent weaknesses, although there is little dispute that owner–managers are the most appropriate people to provide data on the firm and the team. Given time and accessibility, collecting a separate set of data from team members of the respective firms can certainly further enhance our understanding of the fit dynamics, and increase the validity of the findings.

Of the two general types of network studies highlighted by Brass (1995), the ego-centric network approach focuses on the networks of a focal individual, and the whole network approach captures the comprehensive structure linking all members together. In this study, we focused on the egocentric networks of the entrepreneurs. To generate a more comprehensive understanding of the network effect recruitment and selection of talents in entrepreneurial firms, capturing the dynamics of the whole network structure among core team members of the firm should be an important agenda for future studies.

There is also the possibility of country specific bias in our findings, since all the firms in our study are Singaporean local enterprises. Singapore is a predominantly Chinese society, and there will inevitably be a strong influence of the Chinese business culture. The preference for direct, strong ties even in business settings, for example, may be related to the specific Chinese perspectives on relationships (guanxi) and trust. According to Brunner et al. (1989), "the reliability of a guanxi varies directly with its closeness: the closer the guanxi, the more reliable it is; the more distant, the less reliable". Nonetheless, network recruitment practices can also be found in Western societies. For example, Inc., a magazine on fast-growing entrepreneurial firms (Caggiano, 1998; Fenn, 1997) reported similar network strategies used in the recruitment practices of entrepreneurial firms in the US. Hence, the implications of our findings may reach beyond the Chinese cultural context. Comparative studies across cultures should be done in future to test the generalizability of the findings from this study.

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