Strategizing the IT Entrepreneurial Teams:
A Dynamic Equilibrium Perspective

Completed Research Paper

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Abstract

We conducted a multiple case study on six IT entrepreneurial firms to examine and compare their differences. Results show that as they evolve from emergence stage to early growth stage, they encounter misalignments between venture strategies and entrepreneurial teams’ social capital configurations, prompting adjustments to achieve dynamic equilibriums. Differentiating between IT product and IT service entrepreneurial firms, we found that IT product entrepreneurial firms switch their team management strategy from Interests Alignment to a combination of Diversifying Expansion, Functional Specialization, Cognition Unification and Competition Promotion when their venture strategy changes from product R&D at the emergence stage to market expansion at the early growth stage. Conversely, IT service entrepreneurial firms switch from the combination of Diversifying Expansion, Cognition Unification and Competition Promotion to Interests Alignment when their venture strategy evolves from market expansion at emergence stage to service R&D at the early growth stage. Important theoretical and practical implications are drawn.

Keywords: IT Entrepreneurship, social capital, strategic alignment, IT/IS management
Motivation

Entrepreneurial teams have acquired a core position in the creation and management of start-ups (Leung et al. 2013; West 2007). Unlike the solo entrepreneurship, team-based entrepreneurship embraces a number of superiorities due to the advantages conferred by its social capital (i.e., “the sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by individual or social units” (Nahaphiet and Ghoshal 1998, p.243)). Entrepreneurial teams, with the diversity of their members, can often achieve higher level of comprehensiveness in their task delegation and decision making activities (Beckman 2006). In addition, entrepreneurial teams can often capitalize on their heterogeneous personal networks to gain access to abundant resources (Bjornäli and Aspelund 2012). These superiorities in entrepreneurial team’s social capital contribute to a higher survival and success rate of team-based entrepreneurial firms (Lechler 2001).

Although there has been a growing number of studies in recent years that apply the social capital perspective (Bourdieu 1985) to study entrepreneurial teams, they primarily examined static team characteristics (Discua Cruz et al. 2013; Hmieleski and Ensley 2007; Watson et al. 2003) that might predict the entrepreneurial performance and outcomes (e.g., Beckman et al. 2007; Forbes et al. 2006). By adopting a static approach, entrepreneurial teams are assumed to be immutable and unchanged entities (Chowdhury 2005). It fails to sufficiently capture the evolvement paths of the entrepreneurial teams that ensure their firms’ survival and growth in early stages (Ucbasaran et al. 2003). Research that explores the turnover of entrepreneurial teams (e.g., DeTienne 2010; Vanaelst et al. 2006) has hinted at the significance of examining “dynamism”, but to date there has been little research systematically addressing this important research gap (Schjoedt et al. 2013).

Entrepreneurial research applying the social capital perspective has also justified the deterministic effects of three dimensions of social capital on team effectiveness and venture performance (e.g., Foo et al. 2005; Reuber and Fischer 2002; Stam and Elfring 2008). The three dimensions are structural social capital (i.e., network structure), cognitive social capital (i.e., shared interpretation), and relational social capital (i.e., interpersonal trust). However, the contingent values of these three social capital dimensions in different situations lack research (Zhang et al. 2008). It has been suggested that the same social capital that enhances and accelerates a firm’s growth in some situations may become ineffective or even create lock-ins which jeopardizes a firm’s performance in other situations (e.g., Gedajlovic et al. 2013; Uzzi 1997).

We propose the study of the relative importance of each dimension of social capital as well as the potential interactions among these dimensions. By examining the relative importance, we would unravel how ventures might benefit from different dimensions of social capital at different stages (e.g., Liao and Welsch 2003; Luo et al. 2004). By examining the potential interactions, we would elucidate the complementing or substituting effects among different dimensions of social capital (e.g., Luo et al. 2004; Packalen 2007). By considering these two aspects, we would unravel how social capital configurations ‘fit’ with venture strategies to maximize performance (e.g., Lin et al. 2006).

To contextualize our research, we focus on the IT industry, which is characterized by high technology volatility (Anderson et al. 2000), great market uncertainty (Mendelson 2000), and intensive market competition (Kim et al. 2000). These characteristics of IT industry generate a highly dynamic task environment, which prompts the entrepreneurial teams to constantly adjust their social capital to match different environmental demands in their early stages (Chandler et al. 2005). Probing further, we split the IT industry into its two major segments (i.e., IT products and IT services), as they might have different critical success factors (Murray and Kotabe 1999) and hence, idiosyncratic development paths. Past studies applying the upper echelon perspective (Finkelstein and Hambrick 1996) have elucidated the value of fit/alignment between top management team (TMT) structure and strategic choices (e.g., Vanaelst et al. 2006). Building on this TMT structure-business strategy alignment perspective, we explore how IT entrepreneurial teams dynamically formulate and adjust their team management strategies to achieve a dynamic equilibrium between their social capital configurations and their venture strategies in the changing environments.

In essence, to address the aforementioned research gaps, we focus on these 2 research questions:
(1) How do the IT entrepreneurial teams dynamically align their social capital configurations with their venture strategies in their early stages by formulating team management strategies to adjust different dimensions of social capital?

(2) What are the implications of the nature of the IT business (i.e., IT product vs. IT service) and stage of the development (i.e., emergence vs. early growth) on the formulation of team management strategies?

**Literature Review**

**Entrepreneurial Team and the Early Stages of Entrepreneurial Firm**

The entrepreneurship literature has diverse opinions on who is part of the entrepreneurial team for denovo startups. There are primarily two streams of thoughts. One stream generally equates the entrepreneurial team with the founder team and defines entrepreneurial team as two or more individuals who jointly create and manage a firm in which they share financial interests and have direct influence on strategic choices (e.g., Chowdhury 2005; Ensley et al. 2002; Ruef et al. 2003). Another stream lessens the founder criterion and views the entrepreneurial team as a group of entrepreneurs who share ownership and involve themselves in running the new firms (e.g., Harper 2008; Schjoedt et al. 2013). In this study, as we are studying the development of the entrepreneurial team over time, it is important to not only focus on the founding team, but also acknowledge that the team may change over time (Hellerstedt 2009). Hence, we follow the second stream and define entrepreneurial team as a group of entrepreneurs who jointly share ownership and influence the strategic choices of the nascent venture. An entrepreneurial team member is a person who both possesses ownership and makes strategic decisions for the venture.

In the discourse of entrepreneurship and strategy, organizational lifecycles are used to suggest that firms dynamically evolve through progressive stages of emergence, early growth, later growth, maturity, and often death (Brockner et al. 2004; Cardon et al. 2005; Gartner and Brush 1999). One critical assumption about the lifecycle approach is that each stage has unique strategic goals and resource needs (Hite and Hesterly 2001). Hence, firms must overcome their resource challenges at each stage so as to succeed (Bhide 1999). Drawing from the evolutionary literature, some researchers suggested that the demands on an entrepreneurial team may differ at different stages (Birley and Stockley 2000). Entrepreneurial team’s structure and configuration must be constantly changed to meet the strategic resources demands of the firm (Vanaelst et al. 2006). While we recognize the full spectrum of life cycle stages, we choose to focus on the emergence stage and early growth stage since the entrepreneurial teams have a more prominent role in resource acquisition and strategy execution at these two stages.

The emergence stage of entrepreneurial firm starts when the firm is legally created (Hite and Hesterly 2001). The strategic goal for entrepreneurial firm during this stage is typically organizational survival. Suffering from the liability of both newness and smallness, the newly created firm is characterized by high market uncertainty (Gartner et al. 1992) and low legitimacy (Katz and Gartner 1988). The early growth stage begins when the firm intentionally grows beyond mere survival or sufficiency (Hite and Hesterly 2001). Compared to emerging firms, early growth firms require much broader resources to combat with higher market uncertainty, although their legitimacies are greater than the emerging firms.

As discussed, the structure and configurations of entrepreneurial teams must be changed dynamically to match with venture’s strategy and resource needs during their early critical stages (Clarysse and Moray 2004). Hence, our study chooses to focus on the entrepreneurial team evolvement during their early development stages (i.e., emergence stage and early growth stage).

**Social Capital of Entrepreneurial Teams**

Central to the evolvement of entrepreneurial team are the changes of its social capital (Weisz 2004). Social capital is broadly described by researchers as an asset embedded in relationships of individuals, communities, networks or societies (Walker et al. 1997). It is a goodwill created through social relations that can be mobilized to facilitate the attainment of needed resources, influence, and sponsorship (Adler and Kwon 2002). Entrepreneurial research applying the social capital perspective has relied largely on
Nahapiet and Ghoshal’s (1998) framework to classify social capital into structural, cognitive, and relational dimensions (e.g., Liao and Welsch 2003; Maurer and Ebers 2006).

Structural social capital refers to “the overall pattern of connections between actors — that is, who you reach and how you reach them”, which describes “the impersonal configuration of linkages between people or units” (cf. Nahapiet and Ghoshal 1998, p.244). Structural social capital is rooted in Granovetter (1992)’s structural embeddedness, which refers to the structure of the overall network of relations. Extrapolating to entrepreneurial team level, structural social capital deals with the network structures of the entrepreneurial team. In terms of its implication for performance, scholars still disagree on what kind of team network structure is “best” (Gargiulo and Benassi 2000). Some researchers advocate closed networks for enhanced performance (Coleman 1988), while other researchers advocate open network (Burt 1992). For the former, it has been found that entrepreneurial teams embedded in closed networks with strong ties among contacts can facilitate the formation and search of entrepreneurial firms (Aldrich and Kim 2007). Familiarity among entrepreneurial team members can engender cohesion and behavioral integration that allows team members to interact in a flexible and efficient manner, thereby improving firm performance (Foo et al. 2006). For the latter, it has been argued that entrepreneurial teams which exploit open networks and access to non-redundant information can foster creative actions (Shalley and Perry-Smith 2008) and enhance firm performance (Vissa and Chacar, 2009). To reconcile these two views, researchers have suggested a complementary relation between these two network structures, whereby “brokerage of structural holes in open networks is the source of added value while the closure can be critical to realizing the value buried in the structural holes” (cf. Burt 2001, p.52).

Cognitive social capital is defined as “those resources providing shared representations, interpretations, and system of meaning among parties” (cf. Nahapiet and Ghoshal 1998, p.244). There are a number of factors that might influence the entrepreneurial team member’s cognition and interpretation. Some researchers have focused on demographic characteristics (e.g., ethnicity and gender) to explain the heterogeneity in cognitions (e.g., Kilduff et al. 2000; Wiersema and Bantel 1992). However, more recent scholars have suggested that the functional background of team members could be a more appropriate surrogate indicator of the cognition heterogeneity of new venture teams (Ucbasaran et al. 2003). Scholars are still debating whether functional homogeneity or functional heterogeneity is better for venture performance. Some researchers have suggested that functional heterogeneity of venture teams ensures a broader range of skills and abilities needed to manage the venture, thereby enabling the venture to make more comprehensive strategic decisions (Talaulicar et al. 2005) and achieve critical milestones (Beckman et al. 2007). However, other researchers opposed by arguing that functional heterogeneity may induce dysfunctional cognitive and affective conflicts among team members, which if not well managed, could jeopardize the venture performance (e.g., Ensley et al. 1998; Ensley and Pearce 2001; Yu 2002).

Relational social capital describes “the kind of personal relationships people have developed with each other through a history of interactions” (cf. Nahapiet and Ghoshal 1998, p.244). Rooted in the relational embeddedness proposed by Granovetter (1992), relational social capital emphasizes the quality of interpersonal relationships in the networks. A key facet of the relational embeddedness of social capital is relational trust (Moran 2005). Past researchers have empirically found that mutual trust among entrepreneurial team members motivates the members to share more information and feel safe expressing different opinions (Talaulicar et al. 2005), thereby allowing the team to make better strategic decisions (McEvily et al. 2003). Mutual trust means individual team members have a sense of other members’ motivations and behavioral tendencies (Mayer et al. 1995), thereby improving the coordination among team members (Blatt 2009) and fostering product or service offer development efficiency (Dreuf and Weingart 2003). Despite its potential benefits, high level of trust is not unequivocally productive (Amason 1997). High level of mutual trust often reduces the cognitive conflict and debate that can contribute to comprehensive decision making (Talaulicar et al. 2005). At times, it may also result in a “not invented here” syndrome that reduces the new venture’s innovative capability (Chen and Wang 2008).

Based on the above discussion, we define structural social capital as the level of structural embeddedness of an entrepreneurial team. When most team members are acquainted with one another before joining the startup (i.e., closed networks), e.g., family members or colleagues in the same company, the structural embeddedness of the team is high. When most team members do not know one another before joining the venture (i.e., open networks), the structural embeddedness is low. We define cognitive social capital as the level of shared interpretations among entrepreneurial team members. When most team members have
the same functional backgrounds (i.e., functional homogeneity), they are likely to have high level of
shared interpretations towards the strategies and decisions of the venture. When team members have
different functional backgrounds (i.e., functional heterogeneity), they are unlikely to possess much shared
interpretations. Finally, we define relational social capital as the level of mutual trust among
entrepreneurial team members. These three dimensions of social capital jointly form the social capital
configuration of an entrepreneurial team.

In sum, the value of the three dimensions of entrepreneurial team’s social capital lies in raising levels of
illusions of control (Carolis and Saparito 2006; Carolis et al. 2009), creating distinctive knowledge base
(Yli-Renko et al. 2002), and accelerating entrepreneurial discovery and exploitation processes (Davidsson
and Honig 2003). Past studies, however, adopted a static approach toward examining entrepreneurial
teams and their social capital, thereby failing to provide generalizable team management strategies that
would adjust the team’s social capital configuration to accommodate ventures’ strategic shifts and
environmental dynamism (Chandler et al. 2005; Maurer and Ebers 2006).

**Contingent Values of Social Capital**

Recent studies adopting a contingent perspective of social capital (Burt 2001) have suggested that the
value of each dimension of social capital hinges on various moderators, such as human capital (Batjargal
2007), venture growth potential and technology/product (Batjargal and Liu 2004), and entrepreneurial
strategies of the venture (Lin et al. 2006). Echoing this contingent perspective and hinting at a dynamic
perspective of social capital, some researchers have discussed the relative importance of the
different social capital dimensions. For example, Liao and Welsch (2003) discovered that technology-
based entrepreneurs benefit more from relational embeddedness while non-technology-based
entrepreneurs benefit more from structural embeddedness. Moran (2005) found that structural
embeddedness plays a stronger role in explaining managerial sales performance, whereas relational
embeddedness plays a stronger role in explaining managerial performance in product and process
innovation. These studies suggest that different social capital dimensions have different relative
importance under diverse situations.

In addition, prior studies have also paid increasing attention to the possible interactions among the three
social capital dimensions. The presence of one dimension of social capital may either increase or decrease
the values of other dimensions (Packalen 2007). From a complementary perspective, Maurer and Ebers
(2006) discovered that the introduction of external business partners into the entrepreneurial ventures
must be supplemented by internal functional roles integration. Vissa and Chacar (2009) suggested that
entrepreneurial team’s strategic consensus and internal cohesion complement their external advice
networks. From a substitutive perspective, Reagans et al. (2004) discovered that the functional
heterogeneity will reduce the benefits of external network range of the team.

Taken together, prior research has offered the relative importance and interactions (complementary vs.
substitutive) of social capital dimensions as two potential explanations for the contingent values of social
capital. Our study thus strives to echo and enrich the literature on contingent values of social capital by
injecting a dynamic perspective into the social capital research.

**Methodology**

There are two reasons towards our adoption of qualitative, multiple case study (Eisenhardt 1989). First,
our primary research question is to explore “how” IT entrepreneurial teams dynamically adjust their
social capital configurations with their venture strategies. Such “how” question is better explored through
qualitative case studies that can better develop a holistic understanding of real-life events (Yin 2003) and
elucidate dynamic processes involving multiple causal chains (Pettigrew 1992). Second, the venture
strategies and their coupling team management strategies are complicated and inextricably linked to the
business nature and development stages of the ventures. The multiple case study can enhance the
generalizability of the findings while maintaining a fair degree of details (Graebner 2009).

Based on these considerations, we intentionally select multiple team-based IT entrepreneurial firms that
meet these three criteria: (1) entrepreneurial firms with an age of 2-10 years (i.e., in line with previous
studies on early stages of entrepreneurial firms e.g., Bloodgood et al. 1996; Eisenhardt and Schoonhoven 1990; Preece et al. 1998); (2) entrepreneurial firms which have not experienced IPOs and are not acquired by other firms (i.e., in line with the classic definitions of entrepreneurial firm e.g., Kazajian 1989; Mintzberg 1982); (3) entrepreneurial firms which provide IT products or IT services (because we conjecture that entrepreneurial teams in IT product firms may experience different evolution pathway as compared to those in IT service firms). Noteworthy, IT service ventures typically start with delivering various services to a wide range of clients with the support of relatively mature IT systems. It is a kind of project-based operation at the beginning whereby the major strategic focus is to capture a large number of clients by satisfying their existing service demand. Only when a broad client base is secured can the IT service venture introduce service innovations to generate new revenues from these clients. However, IT product ventures usually emerge with radical and breakthrough product ideas in mind, and strive to develop these ideas into commercializable IT products after their founding. Only when the IT products are successfully developed can the IT product ventures "create a market" for the products – educate the market about the needs of the products they have come up with. Taken together, IT service ventures might kick off with market expansion which is followed by service research and development (R&D), while IT product ventures might invest significantly in product R&D at the start and subsequently compete for market shares with the developed IT products. Hence, we select cases for each of these 2 categories.

As suggested by Graebner and Eisenhardt (2004), cases are treated as a series of experiments, each serving to confirm or disconfirm inferences drawn from the others. We complete case selection when the collected data reaches a state of theoretical saturation (Eisenhardt and Graebner 2007). The selection yields six firms with three offering IT products and three offering IT services. All the six cases are selected from Zhongguancun Technology Park in Beijing, China. A key advantage is that it helps wipe out the potential confounding effects from geographic and institutional factors. Table 1 briefly illustrates the profiles of the six cases.

<table>
<thead>
<tr>
<th>Company</th>
<th>Industry</th>
<th>Main Deliverables</th>
<th>Company Size (employee no.)</th>
<th>Company Age (year)</th>
<th>Current Venture Team Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Banking supervision system</td>
<td>Product</td>
<td>40</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>J</td>
<td>RFID application systems</td>
<td>Product</td>
<td>30</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Z</td>
<td>Smart phone application</td>
<td>Product</td>
<td>70</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>B</td>
<td>BPO, ITO, Wifi, WLAN</td>
<td>Service</td>
<td>750</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>H</td>
<td>IT infrastructure operation services</td>
<td>Service</td>
<td>490</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>W</td>
<td>Content marketing, Media consulting</td>
<td>Service</td>
<td>95</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

We collected data through face-to-face interviews, questionnaires, observations and secondary data sources. The primary source of the data was from semi-structured interviews. There were different groups of interviewees. First, for each entrepreneurial team, we interviewed the CEO. This selection method is justified by prior studies suggesting that “it is not uncommon for studies of teams to rely on the information provided by key respondents, such as the chief executive officer (CEO) (Eisenhardt and Schoonhoven 1990; Knight et al. 1999)” (cf. Ucbasaran et al. 2003, p.115). However, to mitigate the possible subjective and self-reporting biases (Miller et al. 1997), we triangulate the data from the top executive level by also interviewing some respondents from other levels (Eisenhardt 1989). Accordingly, we intentionally identified and interviewed other individuals from multiple levels (e.g., middle managers, programmers/analysts) who had stayed in the firm for quite a long time and had witnessed or were familiar with the change of entrepreneurial teams. In total, 18 interviews, with each lasting about 120 minutes, were conducted over several days of company visits. As the research team members all possess an excellent command of both English and Chinese, the interviews were conducted in Chinese (i.e., Mandarin) as it was the preferred language of communication by the Chinese interviewees. All interviews were tape-recorded and transcribed in Chinese. Following the approach proposed by Brislin (1970) for back translation, we engaged a bilingual person to first translate the Chinese version into English. We
then engaged another bilingual translator (who was not aware of the original Chinese transcripts) to translate the English version back into Chinese. The two Chinese versions were then compared to ensure there was no significant difference in meanings. The researchers and the two translators discussed together to finalize the translated English version (Teo and Liu 2007). The final English transcripts totaled 650 double-spaced pages.

During the interviews, we asked probing questions to establish details. The interview protocol began with the personal background of the respondent, followed by some open-ended questions asking about their knowledge and understanding of the formation and development of their firms’ entrepreneurial teams. We focused on facts and events during the interview process to mitigate both cognitive biases and impression management of the respondents (Miller et al. 1997). We also promised confidentiality to ensure that the informants are comfortable in providing accurate data (Miller et al. 1997). We reduced retrospective biases by triangulating the interview accounts with data from internal archival materials and public sources (Eisenhardt 1989).

All the data we gathered through various instruments was collected in a case study database and jointly analyzed by the two authors. We first built up a detailed case write-up for each individual case by synthesizing various data sources (Eisenhardt 1989). We then used these individual case write-ups for within- and cross-case analysis, which helped us generate more insights.

Multiple Case Study Analysis

Adopting the classification of early development stages (i.e., emergence vs. early growth) by Hite and Hesterly (2001), we analyzed the six case firms. Table 2 and Table 3 summarize our major findings. First, we discover two major evolvement paths of the IT entrepreneurial firms. IT product entrepreneurial firms typically start with the product R&D strategy at emergence stage, but switch to the market expansion strategy at early growth stage. In contrast, IT service entrepreneurial firms typically begin with market expansion strategy at emergence stage, but switch to the service R&D strategy at early growth stage. Second, we abstract five team management strategies (i.e., Interests Alignment, Diversifying Expansion, Functional Specialization, Cognition Unification, and Competition Promotion) adopted by the firms to adapt their social capital configurations to the changing venture strategies. Third, we describe how the IT entrepreneurial teams formulate team management strategies by considering the contingent values of social capital (i.e., relative importance and potential interactions among social capital dimensions).

| Table 2. Team Management Strategies and Changes of Team Social Capital at Emergence Stage |
|----------------------------------|----------|----------|----------|----------|----------|----------|
| Company                          | S        | J        | Z        | B        | H        | W        |
| Business Deliverables            | IT Products | IT Products | IT Products | IT Services | IT Services | IT Services |
| Team Management Strategy         | Interests Alignment | Interests Alignment | Interests Alignment | Diversifying Expansion; Cognition Unification; Competition Promotion | Diversifying Expansion; Cognition Unification; Competition Promotion | Diversifying Expansion; Cognition Unification; Competition Promotion |
| Structural Social Capital        | High     | High     | High     | High → Low | High → Low | High → Low |
| Cognitive Social Capital         | High     | High     | High     | Low → High | Low → High | Low → High |
| Relational Social Capital        | High → Low | High → Low | High → Low | High → Low | High → Low | High → Low |
In this analysis section, we group our findings into four categories based on business deliverables (i.e. IT products vs. IT services) and stage of business venture (emergence stage vs. early growth stage). We shed insights on how the dynamic equilibriums between IT entrepreneurial team’s social capital configurations and venture strategies are successfully achieved in the four categories. Finally, we synthesize the team management strategies and offer theoretical justifications for them in the discussion section.

**IT Product Firms - Emergence Stage**

In the emergence stage of the IT product firms, the venture strategy tends to focus more on product R&D. This is because they need to quickly develop their innovative ideas into product offers that could attract potential customers in the market. As a result, ventures often invest heavily in building production oriented entrepreneurial teams to meet the R&D requirement.

From our case evidence, Company S, J and Z are all IT product firms. In their emergence stage, they had similar initial social capital configuration (i.e., high structural social capital and relational social capital, and high cognitive social capital). They shared similar reasons for this configuration. All the three IT product ventures were initially founded by a group of people who were either friends or colleagues before joining the ventures. They trusted one another and most of them possessed technical backgrounds. Hence, both their initial relational social capital and cognitive social capital were high. Since they were already familiar with one another before inception, they had high level of initial structural social capital. After the first few years of operations, some of the key entrepreneurial team members left the companies due to uncertain market prospects and personal life pressures, which rendered the existing entrepreneurial teams instable with low trust and working morale. This greatly reduced the relational social capital of the teams.

As the primary venture strategy of the three firms in their emergence stage was product R&D, relational social capital became a critical component for the success of product innovation (Moran 2005). Relational social capital engenders commitment which ensures the persistence of team members in face of high market uncertainty during product R&D (Watson et al. 1995). In addition, relational trust and cohesion among team members facilitate freer and greater exchange of fine-grained information and tacit knowledge, thereby accelerating the information processing speed and triggering the invention of new solutions (Uzzi 1997). Similar to relational social capital, cognitive social capital is also important for product R&D in that shared cognitions and system of meaning allow entrepreneurial team members to overcome interpretive barriers, thereby fostering product innovations (Dougherty 1992). Unlike relational social capital and cognitive social capital, structural social capital primarily deals with resource seeking and mobilization, rendering it less important than other aspects of social capital at this stage (Liao and Welsch 2003; Moran 2005). Hence, an ideal social capital configuration for product R&D strategy should be high in both relational and cognitive social capital. From the interviews and discussion, all three firms
were low in their relational social capital (i.e., S, J and Z all changed from high to low). In order to achieve such ideal social capital configuration, the three firms all strived to nurture mutual trust and commitment through setting up positive sanctions, such as teamwork and reciprocity spirit promotion, or negative sanctions, such as exit policies (Maurer and Ebers 2006). Quoting the CEOs:

“As suffering from several failed product experiments and the high work pressures during the (emergence) stage, some technical founders lost their confidence for the venture and left. To increase the loyalty and work morale of the remaining ones, I incorporated teamwork and reciprocity into our enterprise spirits, trying to make them believe that only by working collaboratively as a team and helping one another without reservation can we achieve the success of product development.” (CEO-Company J)

“At the beginning (of the venture), the product market was highly uncertain and the money invested in R&D was not immediately compensated. Several technical founders lost their confidence and planned to withdraw. To retain the stability of the technical founding team and ensure the continuity of R&D process, I proposed to set out an agreed exit policy in which the founders were not allowed to exit the team during the first three years. If they wanted to leave from the fourth year, other members could buy back their stock shares. This policy obliged the technical founders to stay with the venture during the first several years. We could never have the new system born without this policy.” (CEO-Company S)

By imposing these different sanctions in their emergence stage, the three firms were able to achieve a high level of relational social capital to meet the product R&D requirement, so that the overall configuration of social capital was improved and aligned with the venture strategy, that is, product R&D. These efforts in the emergence stage have accelerated the product innovation, which ensures the successful development of commercializable IT products that expand to different markets (i.e., customer segments) at the next stage – early growth stage.

**IT Product Firms - Early Growth Stage**

When IT product firms entered their early growth stage, they started shifting their venture strategies from product R&D to market expansion (see Table 2 and Table 3 for the evolvement of the venture strategy). Transiting to the early growth stage, their product development capabilities had mostly been established and matured, and the existing customer base could not meet their increasing capital demands. They were challenged by the need of increasing their market share. In order to cope with this need, the social capital configuration of entrepreneurial teams had to be re-aligned again. Of the three dimensions of social capital, structural social capital and cognitive social capital were the key ingredients to achieving the market expansion strategy, which required both high level of network externalization and comprehensive functional skill set. All the three IT product ventures inherited high level of structural embeddedness and functional homogeneity from their emergence stage, which hindered the market expansion. Hence, they all engaged external managers or strangers into their teams, so as to reduce their teams’ structural embeddedness. They also tried to engage specialized experts into the teams to manage the functional departments. However, engaging specialized functional members would increase team heterogeneity and reduce the shared interpretations among team members. As a result, they strategically conducted frequent management team meetings to align team members’ cognitions. This strategy was used to make up for the reduced shared interpretations due to functional specialization. These three strategies complemented one another to ensure successful and sustainable market expansion. Quoting one CEO:

“We did not schedule the regular meetings previously for all the entrepreneurial team members, and just held meetings on demand whenever there was a technical issue. But now we have members from different disciplines. Thus we enforce the regular strategic meetings for all team members to share and coordinate their personal insights.” (CEO-Company S)

Although the structural and cognitive social capital were well managed for market expansion in the three firms, the high relational social capital among technical members inherited from emergence stage created relational lock-ins that reduced technical team members’ motivation to contact with new members beyond their existing networks (Gargiulo and Benassi 1999). The mutual trust and reciprocity motivated team members to invest most of their energies in maintaining their existing strong relationships, while the negative sanction represented by penalties for betrayal increased the members’ perceived risks of socializing with the newly joined functional members. These relational lock-ins might counteract the benefits of network externalization and functional specialization (Maurer and Ebers 2006). To get rid of
this potential negative effect, all the three ventures intentionally promoted performance comparison and benign competition among technical team members, thereby motivating them to cooperate with newly-joined functional members to increase customer base. As the CEO pointed out:

“We included sales revenues into the KPIs of the technical founders to motivate them to do better. As such, all the technical founding team members cooperate with the new functional members to increase the customer base he/she has.” (CEO-Company Z)

**IT Service Firms - Emergence Stage**

Research suggests that service firms usually compete with one another on customer base (Berry 1995). Hence, during their emergence stage, IT service firms should quickly establish their brand names and legitimacy by accumulating large customer bases (Bresciani and Eppler 2010). This triggers them to put their strategic focus on market expansion in their emergence stage.

In our case study, Company B, H, and W are all IT service firms. In their emergence stage, their social capital configurations of entrepreneurial teams were similar (i.e., high in structural social capital and relational social capital, low in cognitive social capital). As company B and H were both spin-offs from multinational companies, there was relatively high familiarity among team members, which resulted in initial high level of structural social capital. The entrepreneurial team of Company W was formed by a group of industrial professionals who were colleagues before, and hence possessed high structural social capital. The relational social capital was high since all the team members were also close friends in their daily lives and trusted one another. Cognitive social capital was initially low since all the three entrepreneurial teams were formed by members with heterogeneous functional backgrounds.

Aforementioned, the venture strategy for the IT service firms was market expansion in their emergence stages, which encouraged them to build an open network and comprehensive functional set so as to meet the expansion need. Since they were already endowed with specialized functional experts, they basically strived to engage additional experts that were not in their current networks, so as to meet their market expansion requirements. However, the heterogeneous functional backgrounds among the members might potentially reduce the value of network diversification due to the reduction of shared understandings. As such, there was a need for entrepreneurial teams to concurrently facilitate frequent communications among members so as to restore the shared interpretations. In essence, it served to combat the side effects of functional heterogeneity. Similar to the case of IT product firms in their early growth stage, Company B, H, and W suffered from relational lock-ins due to their congenital high relational trust. To maximize the benefits of network externalization, they all promoted performance comparison and benign competition among the founding members to reduce the relational inertia. As highlighted by the CEOs:

“Since the day of founding, I planned to build up our brand by increasing our market share. So we kept on expanding our customer base. The company can only survive by attracting more customers. We kept hiring new members to complete our functional departments. We held management meetings every week to share experience. We compensated those founders who perform better in seeking customers” (CEO-Company H).

“Originally we decided to focus on the Internet content marketing market, but soon we considered expanding our customer base by providing media consulting services. Therefore, one month later, we found a general manager for the Internet content marketing service subsidiary. We held executive meetings weekly to coordinate behaviors while we also compared the profits between the subsidiaries, which we termed as a “co-opetition” relationship.” (CEO-Company W)

**IT Service Firms - Early Growth Stage**

IT service firms in their early growth stage started shifting their business focus from market expansion to R&D (which was the reverse of IT product companies’ venture strategy). Back in the emergence stage, most improvements to service activities were incremental to, rather than radically different from, existing services so as to quickly expand their customer base. Rarely does a company develop a service that creates an entirely new market or so reshapes a market that the company enjoys unforeseen profits for a considerable length of time (Leonard et al. 2006). So, while these marginal improvements were useful and
Indeed necessary in emergence stage, they were limited in the kind of returns they could produce to spur revenue generation in their early growth stage. In such situations, service R&D became critically important for sustaining the position in the market and exploiting revenue from the existing customer base. Similar to the situation of product R&D, relational and cognitive social capital of the entrepreneurial teams became more prominent critical success factors (CSFs) for the IT service firms at this stage. Successful entrepreneurial teams would always invest in their members’ trust and shared cognitions to perform at consistently high levels.

The case evidence revealed that in the previous emergence stage, through the promotion of performance comparison, the IT service firms could reduce relational lock-ins to achieve high levels of market expansion. But this low relational social capital became unsuitable in their growth stage when the venture strategy changed to service R&D. In our cases, all the three IT service venture teams suffered problems imposed by their low relational trust. After years of internal performance competition among team members in their emergence stages, they might develop hostile and unfriendly attitudes towards one another. The trust among the entrepreneurial team members waned. This situation aggravated when there was a need for service innovation in the early growth stage. These firms felt compelled to rejuvenate their relational social capital. Similar to IT product ventures at their emergence stage, they devised positive as well as negative sanctions to revive the trust and commitment among the team members. As the CEOs recounted:

“We now regularly launched some informal social networking activities among management team members at leisure time, such as tea breaks, dinners, or trips. These networking sessions helped in injecting the teamwork spirits into the management team, which provided the members with a casual and relaxing environment to communicate and exchange their ideas, and generate radical service innovations.” (CEO-Company H)

“To enhance the cohesion and centripetal force of the management team, we mutually agreed on a policy that we would save our managerial profits in a company financial reserve to prepare for any unexpected failures, rather than use the profits as managerial bonus or dividends. This policy worked to align one another’s interests and increase their loyalty and commitment.” (CEO-Company W)

Unlike the low level of relational social capital at the start of early growth stage, the IT service ventures all possessed high level of cognitive social capital, due to their cognition unification efforts at the emergence stage. Hence, the ventures did not need to execute new strategies to increase their cognitive social capital at the early growth stage.

Discussion

In this section, we would (1) discuss the key factors that determine/influence the formulation of the venture strategy; (2) elaborate on the team management strategies adopted by IT entrepreneurial teams for adjusting different social capital dimensions; and (3) expound on how the dynamic equilibrium between IT venture strategy and IT entrepreneurial team social capital configuration can be achieved across the venture early stages (i.e., emergence stage and early growth stage).

Figure 1 illustrates the framework to describe how the IT entrepreneurial team management strategies are being formulated to adjust social capital configurations so as to achieve the dynamic equilibrium/alignment between the social capital configuration and IT venture strategy that are jointly determined by business-focus and business-deliverables.
Influential Factors on IT Venture Strategy Formulation

IT entrepreneurial teams conceive their strategic plan by first clearly determining their business deliverables, which can be generally classified as IT products or IT services. For most IT product firms, the primary goal is to design commercializable IT products and sell the IT products to customers. However, for most IT service firms, the primary concern is to capture a broad range of customers and generate revenues from these accumulated customers as much as possible.

After establishing the business deliverables, IT entrepreneurial teams formulate different venture strategies according to different business focuses at different development stages. From our case studies, there is a generalized pattern that could help us better understand their venture strategy formulation. As the business focus of the venture is shaped by the IT market contexts surrounding the ventures, it is constantly altered in response to the changing market needs. In essence, IT product firms are typically established to exploit innovative product opportunities in markets of high technological volatility and market uncertainty. Hence, they tend to strategically focus their resources on product R&D at the emergence stage, with the aim of developing their innovative product ideas into marketable IT products in the shortest periods to generate returns as soon as possible (Scott and Bruce 1994). When they reach the early growth stage, the markets for their IT products become mature and a number of competitors enter. They will shift their attentions to market expansion, so as to occupy a greater amount of market share for their matured IT products. In contrast, IT service firms usually start by operating in relatively mature IT service markets. Such markets are filled with a great number of competitors, which prompts the IT service firms to scale up their service intensity to compete for customers. They tend to focus on market expansion immediately after their businesses are established. To survive the emergence stage, IT service entrepreneurs aggressively reach out to various customers and seek market recognitions by providing mundane and standardized IT services (Ganesh et al. 2000). Customer bases and brand recognitions are valuable resources and competitive edges for IT service firms at this stage. However, when IT service ventures successfully accumulate a broad customer base and goodwill, the demands and revenues for the ordinary IT services may start to shrink. Consequently, IT service ventures tend to dwell on services innovations to produce more creative, unorthodox or value-added IT services to expand revenue channels, so as to maximize revenue exploitation from their existing customer bases (De Jong and Vermeulen 2003).

Team Management Strategies for Different Social Capital Dimensions

To work towards an appropriate social capital configuration, it is important that there are appropriate team management strategies adjusting the different dimensions of team social capital, so as to establish fit with the IT venture strategy. The three dimensions of social capital shed insights to the formulation of team management strategies.
Structural social capital, which provides benefits from network externalization, is invested heavily by IT entrepreneurial teams, especially those who vigorously seek market expansion. In our findings, open and diversified network of an IT entrepreneurial team could facilitate the gain of non-redundant information, and help businesses explore more external networking resources to expand their businesses (Elfring and Hulsink 2003; McEvily and Zaheer 1999). IT entrepreneurial teams with high structural social capital (i.e., high structural embeddedness) are often trapped by the closed networks of relationships and heavily invest their efforts in dealing with contacts within the closed networks, thereby experiencing difficulties in expanding their customer portfolios. This structural lock-in is especially destructive for IT ventures as they are operating in the IT industry whereby there are fierce competitions for customer bases (Kim et al. 2000). From the case evidence, both IT product firms in their early growth stage and IT service firms in their emergence stage adopt the Diversifying Expansion Strategy in which they actively seek team members external to their closed networks (e.g., technical communities, previous joint working experience). This strategy helps in reducing the structural embeddedness of their networks and allows them to get access to a broader range of external customer resources.

Cognitive social capital requires IT entrepreneurial team members to share a similar understanding so as to achieve mutual agreements as soon as possible. As IT product firms scale up their productions for market expansion, a complete and specialized functional skill set is a necessary prerequisite. Complete and specialized functional departments can enhance operational efficiency (Talaulicar et al. 2005) and attract sufficient venture capital (Beckman et al. 2007), thereby improving the IT ventures’ sustainability in the fierce IT market competition. Embracing this rationale, the three IT product firms in their early growth stage adopt the Functional Specialization Strategy in which they engage functional experts into their management teams. This strategy complements the teams’ technical capabilities with necessary functional capabilities, thereby scaling up the production and fostering the market expansion. The three IT service companies are already endowed with specialized functional team members since incorporation, thus they don’t need to adopt this strategy at their emergence stage. Nevertheless, as heterogeneous functional members join the teams, the shared interpretations among team members will be undermined, thereby hindering venture growth in the highly turbulent IT industry (Yu 2002). To restore shared understandings, these entrepreneurial firms executed the Cognition Unification Strategy in which they hold regular management meetings and scheduled discussions among the heterogeneous team members. This strategy works in reestablishing the mutual strategic cognition among team members, enabling them to work towards a common goal in the turbulent IT market contexts (Ensley and Pearce 2001).

Relational social capital could also play prominent roles in IT venture’s R&D and market expansion. From the case evidence, IT entrepreneurial team members require a high level of relational trust and commitment to cooperate and persist in IT product or IT service R&D activities. As IT firms usually adopt the modular design approach for their IT product or IT service innovations, the bonding among IT entrepreneurial team members can facilitate better communication to achieve effective collaborations (Dreu and Weingart 2003). In addition, the mutual trust and commitment among the team members keep the team stable in face of high technological volatility and market uncertainty that typically characterize the R&D activities, thereby ensuring technical continuity and the ultimate R&D success. Thus IT entrepreneurial teams in our cases all adopt the Interests Alignment Strategy in which they devise positive/negative sanctions among team members. This strategy is effective in preserving mutual trust and commitment that are indispensable for R&D success. Nonetheless, high relational social capital is a double edged sword – it may generate relational lock-ins that jeopardizes market expansion. More specifically, the positive sanctions increase the perceived benefits and convenience of interacting with trustful old members, while the negative sanctions engender perceived costs and risks of cooperating with new members. These two kinds of sanctions dampen the willingness and intentions of the old team members to collaborate with new members, thereby creating relational lock-ins that are incompatible with the market competition need of the ventures (Kim et al. 2000). Therefore, all the IT entrepreneurial teams employ the Competition Promotion Strategy in which they advocate performance comparison and benign competition among the old members and motivate them to cooperate with newly added members. This strategy breaks up the overreliance among old team members and boosts their work morale for market expansion. As a summary, we provide the definitions for the five team management strategies discussed above (refer to Table 4 below).
Table 4. Entrepreneurial Team Management Strategies and Definitions

<table>
<thead>
<tr>
<th>Team Management Strategy</th>
<th>Definition</th>
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<tr>
<td>Diversifying Expansion</td>
<td>Entrepreneurial teams actively seek new members external to their existing closed networks.</td>
</tr>
<tr>
<td>Functional Specialization</td>
<td>Entrepreneurial teams engage functional experts into the teams.</td>
</tr>
<tr>
<td>Cognition Unification</td>
<td>Entrepreneurial teams increase the shared interpretations and strategic cognitions among the team members through various mechanisms, such as regular management meetings and real-time discussions.</td>
</tr>
<tr>
<td>Interests Alignment</td>
<td>Entrepreneurial teams enhance the mutual trust and commitment among the members by devising positive and negative sanctions.</td>
</tr>
<tr>
<td>Competition Promotion</td>
<td>Entrepreneurial teams promote benign competitions among the old members to motivate them to collaborate with new members.</td>
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Dynamic Equilibrium Between IT Venture Strategy and IT Entrepreneurial Team Social Capital Configuration

In light of their own evolvement paths and the nature of their business deliverables, IT ventures have to invest more in their entrepreneurial team management capabilities to align their managerial relations with the external environment and development requirements (Venkatraman and Camillus 1984). Hence, IT entrepreneurial teams have to constantly adjust their social capital configuration to meet the everchanging IT venture strategy. The alignment between social capital configuration and IT venture strategy becomes vital for IT entrepreneurs to successfully progress through early development stages.

To achieve a better dynamic equilibrium between the IT venture strategy and social capital configuration, IT entrepreneurial teams should analyze the major compositions of their social capital. In essence, the team management strategies are formulated and adjusted according to the shortfalls of the social capital configuration. During all the adjustments, the relative importance of each social capital dimension has to be taken into account, such that equilibrium can be achieved with efficiency. For example, when the venture dwells on IT product or IT service R&D that are characterized by high technological volatility and market uncertainty, the importance of relational social capital and cognitive social capital outweigh that of structural social capital, as the continuity and efficiency of offer development is directly related to trust and shared interpretations among team members (Dreu and Weingart 2003). Hence, all the teams in our study adopt the Interest Alignment Strategy for their ventures’ R&D strategy. Apart from that, the potential interactions among different dimensions also have to be addressed, such that equilibrium is not offset. For example, there is contention between cognitive social capital and structural social capital (Reagans et al. 2004). More specifically, when IT ventures simultaneously adopt Diversifying Expansion Strategy and Functional Specialization Strategy for market expansion, the increase in functional heterogeneity may offset the benefits of network externalization (Reagans et al. 2004). Consequently, cognitive social capital declines because of increased heterogeneity. It may result in the difficulties of arriving at shared understanding on strategic decisions. Therefore, the Diversifying Expansion Strategy and Functional Specialization Strategy usually come in pairs with the Cognition Unification Strategy. Yet another example is the contention between structural social capital and relational social capital. When ventures adopt Diversifying Expansion Strategy to involve external talents for market competition, the high level of relational social capital among existing members may create relational lock-ins that depreciate the value of network externalization (Gargiulo and Benassi 1999). In order to maximize the returns from diversifying expansion, IT entrepreneurial teams have to devise Competition Promotion Strategy to reduce relational inertia among those trustful old team members as we have found in the case study.
Contributions

Theoretical Contributions

First, our findings contribute to the emerging IS literature on IT entrepreneurship by unravelling the process of strategic formulation in IT entrepreneurial firms. Our results suggest that IT entrepreneurial firms formulate their venture strategies by first determining their business deliverables, be it IT products or IT services. Within different early stages, they narrow their business focus to either R&D or market expansion by contemplating the characteristics of the surrounding IT market contexts. Aforementioned, IT industry has a market characterized by high technology volatility (Anderson et al. 2000), great market uncertainty (Mendelson 2000) and intensive market competition (Kim et al. 2000). These idiosyncratic characteristics of IT market will become salient at different early stages, influencing the business focus of the IT ventures. The business deliverables and business focus work together to jointly determine the IT venture strategies adopted at different stages, resulting in diversified evolvement paths of the IT entrepreneurial firms. By demystifying the strategic formulation process of IT entrepreneurial firms, this study further develops the literature on entrepreneurial firm strategy formulation and fit (e.g., Karami 2007; Naman and Slevin 1993; Rialp-Criado et al. 2010) as well as the strategic entrepreneurship literature (e.g., Hitt et al. 2011; Kuratko and Audretsch 2009) to the idiosyncratic context of IT industry.

Second, unlike past studies which are overwhelmed by adopting a static approach (e.g., Beckman et al. 2007; Talaulicar et al. 2005), we contribute to the field by adding realism and dynamism to entrepreneurial research. In particular, our study fills an important gap to shed insights into how entrepreneurial teams strategically co-evolve with their changing entrepreneurial venture strategies to reshape their social capital configurations across different early stages. To achieve dynamic equilibrium, two major evolvement paths of IT entrepreneurial teams have been identified and discussed. The first evolvement path emerges from the increase in relational trust at the emergence stage, to the increase of network externalization and functional heterogeneity but decrease in interpretation divergence and relational trust at the early growth stage. The second evolvement path starts with an increase in network externalization but decrease in interpretation divergence and relational trust at the emergence stage, to an increase in relational trust at the early growth stage. Charting these two evolvement paths are not random events or coincidences, but rather very well-conceived IT venture strategies (jointly determined by IT business deliverables and business focus). Hence, our findings on the strategic moves and quest for a dynamic equilibrium by entrepreneurial teams further corroborate the upper echelon theory (Hambrick and Mason 1984).

Third, by examining team-level social capital configuration and highlighting the interplay between three dimensions of social capital, our study enriches the social capital perspective, in which the vast majority of research are individual-level (e.g., Batjargal 2003) or firm-level (e.g., Stuart et al. 1999). More importantly, by discerning the possible sources and events that trigger the changes in IT entrepreneurial team’s social capital configuration, our study amplifies and develops prior findings on contingent values of social capital (Burt 2001). In some ways, we better reconcile prior conflicting findings regarding how social capital can influence organizational survival and growth. We reiterate the relative importance of each social capital dimension under different situations (Partanen et al. 2008) as well as the potential interactions among them (Packalen, 2007). This in turn helps justify the actual changes in social capital configuration and rationalizes the formulation of team management strategies.

Fourth, from an evolutionary viewpoint, results of this study enhance our understanding of the sources of inertia and adaptability of the IT entrepreneurial teams as a collective entity. This complements past literature which applies evolutionary perspective to study entrepreneurship (e.g., Birley and Stockley 2000; Hite and Hesterly 2001; Hite 2005). Based on the team-level social capital inertias identified (e.g., relational lock-ins), this study further enlightens us on what strategies IT entrepreneurial teams could adopt to overcome and mitigate these social capital lock-ins so as to adapt their social capital configurations to energize their business venture strategies. Our study reveals that the social capital configurations must dynamically evolve with strategic goals to accelerate the IT venture development.
**Practical Contributions**

Various stakeholders could benefit from this study. IT entrepreneurial teams could learn to better design appropriate IT venture strategies to survive and prosper along with the progress of their ventures. In addition, the theoretical framework developed in this study offers them a referable and workable strategic guideline to devise effective team management strategies to adapt their managerial relations to their IT venture strategies across early entrepreneurial stages. For example, they could devise positive or negative sanctions to persist in face of uncertainty in IT product or service R&D. They could also engage external expertise to break out of their closed and embedded networks for market expansion. However, they should be cognizant of the potential side effects of functional specialization and intentionally promote cognitive unification to preserve benefits of network externalization. They should also be aware of the potential lock-ins created by mutual trust and commitment that may offset the values of network externalization. All these mechanisms, if adopted appropriately, can greatly enhance IT entrepreneurial teams’ efficacy in executing their IT venture strategies, which eventually foster IT venture performance.

Moreover, venture capitalists (VCs) and private equity holders (PEs) can gather from our findings some systemic criteria for gauging the potential and prospects of IT entrepreneurial teams to support. If the IT entrepreneur teams are not capable of adapting their social capital to the changing business requirements, the VCs and PEs may consider reducing their investments, or offering effective advice to these teams to re-strategize their networks and relationships. Likewise, Government Agencies (GAs) can better understand the evolvement of IT entrepreneurial teams, and provide necessary help and guidance to new IT start-ups, alerting them on potential problems or imposing precautionary policies for funding IT entrepreneurial teams.

**Conclusion**

Our study provides preliminary empirical evidence for the establishment of a dynamic equilibrium between an IT entrepreneurial team’s social capital configuration and its IT venture strategy so as to boost performance in its early development stages. To understand the origins, evolvement, and outcomes of strategy alignment, it is fruitful not only to look at various characteristics of team’s social capital, but also to consider the overall strategic equilibrium in the nascent IT ventures.

**Limitations & Future Direction**

Before we offer some future research directions, we acknowledge some limitations in our study. First, our study has identified IT venture strategy as a critical factor that helps shape changes in social capital configuration. While we opine this is the main driving force, it may be moderated by drastic external environment, such as economy downturn (Brondizio et al. 2009; Ishihara and Pascual 2009; Stam and Elfring 2008). Second, our six IT entrepreneurial firms can choose to adapt their social capital when the need arises. This may sometimes be difficult if external influential investors or shareholders are more assertive in dictating that certain members be in or out of the team.

Although our research has contributed to our understanding of the drivers of the evolvement of social capital configuration, there are potential avenues for future research. First, our study has touched on the product and service orientation of the IT industry and their general influences on these IT entrepreneurial teams. More extensive studies can be done by drilling down into the variations and characteristics of different segmentations under either IT products or IT services (Prescott and Conger 1995). It may possibly provide more variations and differences in team management strategies on the adaptation of social capital configuration. Second, in our multiple case study, we discover several complementary and substitutive effects among social capital dimension. Future research could try to explore and examine more possible interactive effects among these social capital dimensions. By doing that, future researchers could shed insights on whether “equifinality” (Doty et al. 1993) exists in the team management strategies by IT entrepreneurial teams at their evolutionary stages. In other words, future research could employ qualitative or quantitative method to see whether different team management strategies help the IT entrepreneurial teams build up the same “ideal profile” (Sabherwal and Chan 2001) in their social capital configuration.
configurations so as to align with IT venture strategies at different stages (Venkatraman et al. 1993). Third, our findings are based on cases from China. As social capital is a culturally influenced and institutionally dependent concept, future research could replicate our study in other countries and cultures to further enhance the generalizability of our findings. For example, future research could investigate whether there are differences between entrepreneurial firms based in United States versus those in Israel. Within a country, there might also be differences between entrepreneurial firms across regions (e.g., New York versus Bay Area). Fourth, as most entrepreneurial teams fail within the first several years after their inception, it would be very interesting to compare and contrast the evolution paths between successful and failed IT entrepreneurial teams. By doing so, future research could enrich the existing entrepreneurship literature which is overwhelmed by a “success bias” in case selection (Ruef et al. 2003).

To conclude, our exploratory study has contributed to the stream of IT entrepreneurial research both theoretically and practically. More research in this direction would benefit academics and practitioners.

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