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## 9. The Contextual Balance of Social Capital within Hierarchical Relations in China: Benefits and Risks

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### INTRODUCTION

In recent years, the unique role of social capital in economic activities has been increasingly recognized. It is believed that social capital influences career success (Gabbay and Zuckerman 1998) and facilitates greater levels of production and enhances team effectiveness (Tsai and Ghoshal 1998). It is also positively associated with a firm's performance (Peng and Luo 2000; Brass et al. 2004) by enhancing innovation while reducing transaction costs for inter-firm collaboration (Robins and Atuahene-Gima 2003). However, previous research gives only limited attention to the role of hierarchical relations in buttressing social capital for business efficiency and focuses either on the relationships between individuals or units within organizations or on partner relationships at the inter-firm level (Uzzi 1997). Therefore, despite being acknowledged as an important component in social capital, the issue of hierarchical relations and their impact on the development of social capital remains under-explored (Adler and Kwon 2002). Furthermore, it is widely accepted that social capital may produce social ills external to the organization (Astone et al. 1999, Warren 2001). While the majority of research using the concept of social capital focuses on the positive consequences of an adequate amount of social capital, little empirical research has been done on how the development of social capital may lead to social risk in a society and to actors themselves. To fill this void this chapter addresses issues of the benefits and risks of social capital that Chinese firms may encounter when networking in a hierarchical social structure.

The hierarchical structure of social capital has been applied to a wide range of social phenomena, including relations inside and outside the firm (Coleman 1988), relations within and beyond the firm (Burt 1992),

firm/government interface (Baker 1990) and public life in contemporary societies (Putnam 1993 1995). This study examines hierarchical relations related to social capital at the level of firm/government interfaces and looks at how a firm engages in external relations with people who have 'monopoly power in business within a government system' (referred to as MPBGS). Specifically, the focus is on the hierarchical relations embedded in social capital, characterized by one side having less dependence and the other side having more dependence. 'Hierarchy is an important dimension of social structure that indirectly influences social capital by shaping the structure of social relations' (Adler and Kwon 2002, p. 27). The issue of hierarchically related social capital is especially important for business success within the context of countries that have limited implementation of legal restrictions and whose economy is heavily based on a hierarchical system of bureaucracy. Examples of these countries include China, India, Russia, Indonesia and Mexico (Raiser 1997, Michailova and Worm 2003), whose organizations tend to be characterized by highly formal authority relations and high power-distance.

Firms in China use networking as an effective business strategy within the current economic and governmental systems. Of the various types of network, developing the social ties embedded in the formal hierarchical system is an important strategic focus for many firms. This is especially the case when firms face an environment in which the Chinese government still exerts a strong influence on economic decision making (Peng and Luo 2000). The role of government raises several research questions: namely, what benefits does a firm expect to obtain through the embeddedness of social capital in people with MPBGS? What risks does a firm expect to face when involved in such relations? It would, therefore, be worth investigating how highly differentiated status relations, together with consequent unequal power in the social structure, influence the benefits and risks of social capital that firms pursue within the context of China's transition economy.

The study covered in this chapter investigates the extent to which this kind of social capital can bring value to the firm in relation to exclusive information and resources. The linkage of these exchanges with the risks of corruption, and the potential cost, is also included in the investigation. The results of this study increase our understanding of the role of power inequality in the development of social capital. More importantly, it increases our knowledge of such features within the context of China's economy.

## SOCIAL CAPITAL AND HIERARCHICAL RELATIONS

Social capital is a productive resource, facilitating actions in a firm's business operations (for example, Baker 1990, Coleman 1990, Burt 1992, Tsai and

Ghoshal 1998). Nahapiet and Ghoshal (1997) argue that it makes possible the achievement of certain ends that in its absence would not be possible or would at least come at higher cost. From a resource-related perspective social capital is 'the aggregate of the actual and potential resources that are linked to the possession of a durable network of relationship or mutual acquaintance and recognition' (Bourdieu 1986, p. 248).

Social capital has also been understood by Fukuyama (1995) as a capability that is based on trust (cf. Putnam 1993, p. 167). Social capital as trust is the capacity of people to work together for common purposes in groups and organizations (Fukuyama 1995). Social organization that can marshal trust, norms and networks can improve the efficiency of society by more easily facilitating coordinated actions (Putnam 1993, p. 167). Social capital, looked at from the perspective of its functional role, is defined as the value to actors of those aspects or resources of the social structure that can be used to realize their interests (Coleman 1990, pp. 302-7). In this study Coleman's definition of social capital is adopted to explain the effects of hierarchical relations on a firm's business. Coleman's definition of social capital is chosen because its emphasis on the function of the social structure reflects the essential features of social capital, which differentiate it from other forms of capital, such as, human and financial capital.

Social capital is the sum of the actual and potential value embedded in social structures, which can be activated through the actors' social exchanges. Although actors are central to social exchanges by virtue of the specific interest they have in realizing outcomes, the social structure is also essential in developing and sustaining social capital. The reason that social capital offers a return is that the social relations embedded in the social structure can provide the antecedents of cooperation, through which actors' resources are complemented, combined and multiplied to mutual benefit (Warren 2001).

Although some exchanges bring about an individual equilibrium based on equal interest and mutual exchanges of resources, many other exchanges are based on hierarchical relations (Warren 2001). With respect to social capital, hierarchical relations refer to a structural relationship between two sides with variously exchangeable value and where levels of social status are differentiated and unequal. Some of these are a type of relations that 'lie between constrained positions' as structural holes, characterized by the absence of a direct link between some actors in the total network. One side of the hierarchical relation has a chance to play the role of brokering transactions between dyadic actors, who are otherwise disconnected (Brass et al. 1998). Brass et al. (1998) argue that such weak ties are likely to bring extra opportunities for the unconnected dyads, compared with a closure of strong ties, which process similar resources and knowledge.

Social exchanges that are enacted through social capital occur within structures of mutual dependence in which actors rely on each other for valued

outcomes (Molm *et al.* 2000). Paired exchanges of social capital do not take place in a vacuum. They develop within a societal context in which there is competition for the resources held by each actor (Coleman 1990, Putnam 1993). Fukuyama (1995). The actors' exchange of power within the structures depends on the perceived value of resources in their interactive relationships (Molm *et al.* 2000). The value of social capital within a context depends on both of the actors' interest in events. In such a situation, if an actor's power is premised on being able to exercise some degree of control over events which are valuable for others in a social network they will create an imbalanced power relation, a hierarchical relation which will shape the nature of social interactions. The chapter empirically tests these links, something not done in previous research, and examines the development of social capital within power imbalanced relations with regard to the opportunities for benevolent or exploitative behaviour.

#### Access to Exclusive Information and Resources

Research suggests that social networks generally facilitate the rapid dissemination of information among members and reduce asymmetries in its distribution that can otherwise discourage profitable transactions (Nahapiet and Ghoshal 1997, Uzzi 1999). There are three types of social capital situated externally to an enterprise through production-related, environment-related and market-related networks (Uzzi 1997, Westlund 2003). A firm may facilitate business transactions through social networks at the peer-relation level. A firm makes reciprocal exchanges either in production-related social capital, which is about inter-firm relations, such as relations with suppliers, or in market-related social capital, which is about networking with customers or buyers.

A firm must also develop environment-related social capital, which involves it embedding its relations with communities, local government and other business enterprises (Westlund 2003). To keep ahead of competition, a firm needs to give an expression of dependence on a predictable institutional infrastructure to facilitate favourable decisions or business policies in a medium-term and short-term perspective (Westlund 2003). A firm develops social capital of hierarchical relations with individuals in the government to downgrade the firm's economic inefficiency by obtaining non-official information (Westlund 2003). Information and resource exchange for business purposes becomes unilaterally important to a firm, while people with higher formal status on the other side monopolize information and exclusively control the distribution of resources.

Social capital is believed to lead to distributive efficiency of resources at the peer level that usually results from market-related and production-related connections (Uzzi 1997). Instead of relative distributive efficiency, based on

free-market operations, social capital in hierarchical relations provides distributive solutions through control of environment-related connections. People with MPBGS are in a position to access exclusive information and resources unilaterally needed by the firm, which enables such people to bring a perceived high value of social capital into exchange relations with the firm, because resources of money, power, prestige and the like are mostly 'structurally embedded' within hierarchies (Warren 2001). Structural holes created by these hierarchical relations present opportunities for brokering information and resources among firms, brokerage opportunities that have the potential for significant economic payoffs (Walker *et al.* 1997, Brass *et al.* 2004). Although people with MPBGS may not hold resources directly, they are able to play the role of a broker to coordinate indirect connections between 'donors' and 'receivers'. According to structural hole theory, people in such brokering positions in a network present opportunities and potential resource flows for unconnected actors to access, which can have great economic payoffs (Burt 1992).

Such an effect of the social capital in hierarchical relations is evident within the context of China's transitional economy. In a weak institutional environment with poorly functioning societal regulations and legal mechanisms, environment-related social capital can be seen as an efficient way of providing responses to the competition. People with MPBGS can disseminate exclusive information and reallocate resources in a manipulative manner by taking advantage of their position. These people are able to provide information and opportunities directly or link otherwise disconnected firms. They are not part of the firm's routine closure networks of production and marketing; rather they are randomly chosen by the firm on the basis of their usefulness and are expected to play a role of structural hole in the firm's social networks. Structural holes are richly embedded in the environment-related social capital of China's cross-functional economic and political systems. To the Chinese firm, when hierarchical relations are closely embedded with relations with government officials, then access can be gained to a range of resources that are usually difficult to access without competing with other firms. Such resources include the difficult issue of land use, permission to import or export certain goods, and projects that are associated with significant financial resources and other production-related resources.

Social networking with people with MPBGS is significant in relation to exclusive information in China. As highlighted above, the market economy in China remains immature. Both local and central governments are constantly introducing a wide range of contingencies and amending policies in order to control the economy. Using embeddedness in the hierarchical structure, the Chinese firm has a chance to facilitate governmental decisions in favour of their own business at the local level. They also have an opportunity to access exclusive information, such as new policies and regulations influencing

industries and the market, before such arrangements are announced publicly. Consequently they are able to prepare themselves better in the competitive market.

Burt (1992) argues that the higher the proportion of relationships enhanced by structural holes, the more likely and able the entrepreneurial players are to develop a higher aggregate rate of return on investments in networks. Whether a firm can gain the required and exclusive information and resources is likely to depend on the result of their social networking with people who possess MPBGS. This leads to the following:

Hypothesis 1: Social capital based on hierarchical relations is positively associated with a firm's access to exclusive business information in China.

Hypothesis 2: Social capital based on hierarchical relations is positively associated with a firm's access to exclusive business resources in China.

Structural holes embedded in imbalance of power relations not only create extra opportunities for access to resources but also more chances for unethical behaviour (Bass *et al.* 1998). On the one hand, a person with MPBGS is able to help the networked firm with exclusive information and access to resources. Their support can be crucial for the firm in enhancing the efficiency and effectiveness of business operations in a highly competitive market. Hence, on the other hand, the use of this hierarchical social capital exposes firms to risks of bribery/corruption interactions and high costs in the pursuit of what appears to be a rational self-interest in an immature system (Warren 2001).

#### **Risk of Corruption and High Cost in Social Capital of Hierarchical Relations**

The imbalance of power in hierarchical relations exerts a determining role in the cost/benefits balance in social capital. It shapes the nature of reciprocal exchanges, the level of trust and commitment present, and the expectation of continued interaction (Molm *et al.* 2000, Warren 2001). According to resource-dependency theory, inequalities in power and dependence create unbalanced power relations, in which the least dependent actor has a power advantage over the others. Lower dependence in a power relation tends to produce a corresponding inequality in exchange benefits between partners to the relation (Pfeffer and Salancik 2003). Unethical behaviour is more likely to occur in structural holes where there are asymmetric relationships (Burt 1992, Brass *et al.* 1998, Warren 2001), since there is a chance for the less dependent actor to request unreasonable reciprocity by trading exclusive resources, information or opportunities. Embedding the relationships with

MPBGS may not only generate value for the business but also expose the firm to exploitation, bribery/corruption interaction and low levels of trust (Brass *et al.* 1998).

Arguably, under conditions where the government's internal structure and processes display sufficient integrity and its external relations with actors in civil society display sufficient synergy, a government's hierarchical relations can support the positive effects of civil society's social capital (Evans 1996). However, in reality such conditions do not readily exist in a transition economy where the legal system is immature or implementation processes are weak (Adler and Kwon 2002). Some social risks may emerge as a result of insufficient integrity within the governmental hierarchical structure. It has been suggested that the development of social capital contains the possibility of creating both positive and negative effects in terms of social relations within societies (Uzzi 1997). Hence, a salient issue is what kinds of negative social outcomes related to social capital occur in societies and firms when transition economies limit the maturity and transparency of key social institutions.

Hierarchical relations within organizations, where obedience to authority is exchanged for material and job security, have negative effects on employee commitment (Brass *et al.* 1998, Adler and Kwon 2002). At the inter-firm or firm-government level, social exchanges with hierarchically based structural holes are also likely to have negative effects on both individuals and members of the wider society (Pildes 1996, Hyden 1997, Adler and Kwon 2002). In line with democratic theory, there should be a close connection between unequally distributed background empowerment and the negative functioning of social capital (Warren 2001).

Warren (2001) argues that corruption is an indirect result of elevated levels of bureaucracy combined with weak democratic processes. In a poorly functioning democracy, where business activities may not be conducted creditably and the empowering institutions and legal mechanisms remain weak, the functions of social capital are likely to be associated with negative externalities. First, these conditions provide opportunity for some in formal hierarchical positions to acquire excessive positional power from controlling economic activities. 'Excessive bureaucratic rules and "red tape" can limit access to government powers and resources', and can be used by officials as power. This is especially the case where officials have 'discretion in interpreting and applying regulations' (Warren 2001). Due to monopoly power in certain economic activities, resource allocation and economic policies are not always transparent, inevitably creating a climate of economic dependence where firms depend on governmental officials.

From a resource-dependence perspective (Emerson 1962, Pfeffer and Leong 1977), power results from both access to and control over important business resources. People who control relevant resources increase others'

dependence on them, thereby acquiring power (Pfeffer 1981, Brass et al. 1998, Pfeffer and Salancik 2003). According to social network theory, they are in a position to decide whether to bring high value to a firm or to what extent a firm should bear high risk (Brass et al. 1998). Power imbalance in social exchange carries the potential for corrupt interaction and a high cost for dependent parties.

The exclusive benefits provided through the social capital of hierarchical relations encourage the firm to develop such social capital at all costs. These costs might include engaging in corrupt interactions or attempting to eliminate other competitors. By using embeddedness, the firm can more readily deal with the people holding monopoly power in order to gain exclusive information and resources. At the same time they can also effectively constrain access for other firms to similar resources and business opportunities, resulting in benefits for themselves as 'insiders' and placing the other firm as the 'outsider' in a network, which limits fair and equitable competition (Warren 2001, Coleman 1990). The immature legal system offers little check on illegal or unethical conduct. The structural holes created by the hierarchy deepen the opportunities afforded by the unchecked situation. Consequently, social capital functions in a climate that cultivates the bribery/corruption interaction, as people with MPBGS can readily act against regulations to fulfil their own self-interest.

Currently, the economy in China is developing without a parallel process of political openness, allowing the government to maintain a strong influence over the operations of the market. Some officials can gain access to new economic resources by trading their power (Warren 2001). There is a many-layered bureaucracy, which functions to control the economy, implement policy and regulations and direct resource allocation in relation to business activity. The system creates no equality in social exchanges either for or with business firms. Unequally distributed power in controlling markets results in many Chinese businesses depending heavily on people with MPBGS. Thus, it is in the interest of the firm to establish social relations with such people. The bribery/corruption interaction may be perceived as an unavoidable means of entry into the network of hierarchical relations or as part of the social capital strategies used by Chinese firms.

The legal system in China is relatively weak. While there are many regulations, their enforcement is indifferent. Put simply, some people in the system have no intention of seriously implementing these regulations. They take advantage of their powerful position and use personal discretion in the implementation process to pursue their own self-interest. In addition, the traditional Chinese culture of Confucianism, which encourages people to accept unequal status within political, social and economic relations, has a strong imprint on the social ideology of modern China. Awareness of the civic right of equality in China is limited; consequently, inappropriate

interactions occurring at some hierarchical levels are not easily detected and monitored (Brass et al. 1998). With all these factors, corrupt interactions are likely to increase when a firm cultivates social capital at upper hierarchical levels.

To secure resourceful hierarchical relations, the firm as the dependent side may have to pay a hefty cost (Bae and Gargiulo 2004). The cost is likely to increase when partners are in a position to impose inordinate contributions on the firm or to appropriate a disproportionate fraction of the value created by the relationship. The benefits that accrue to a firm as a result of an alliance with a resource-rich partner might be offset by the costs associated with maintaining them (Warren 2001, Bae and Gargiulo 2004). The Chinese firm is likely to become the vulnerable partner and bear the bulk of the costs for the social capital of hierarchical relations.

Hypothesis 3: The bribery–corruption interaction is positively associated with the social capital of hierarchical relations in China.

Hypothesis 4: The cost to the firm of cultivating social relations is positively associated with social capital based on hierarchical relations in China.

#### The Moderating Effect of Self-interest

Social capital is the combined effect of the purposes involved in social relations, the structural position in hierarchies that provide resources for actors, and networks that provide access to positions and integrate purposes and resources so that they function as social capital (Warren 2001). Social capital is not a neutral concept with regard to society's interests. It expresses and achieves the interests and purposes of actors, which may be beneficial or detrimental for society (Westlund 2003). Such outcomes are likely to depend not only on the contextual conditions of positional power in the hierarchical structure but also on the motivation of individuals. 'Hierarchy can also influence motivation – through the effect it has on incentives, norms and abilities – through its effect on authority, resources, skills, and beliefs' (Adler and Kwon 2002, p. 27). Many ties come with formal positions and are not chosen voluntarily (Podolny and Baron 1997). People who are able to use state monopoly powers to impose 'rents' on firms that need their information and allocation of resources may seek individual interests (Warren 2001). Social capital can therefore be simultaneously a 'private good' and a 'public good' (Warren 2001).

Taken as a private good, social capital may be turned from a social good to a social ill by individuals with self-seeking motivation. According to agency theory, the purpose of any individual's exchange with others will be

to gain maximum personal outcomes. Therefore, there is a possibility of generating negative societal effects if actors maintain their social capital for maximizing self-interest, especially if the social exchange is attached to an imbalance of power. The power inherent in hierarchies encompassing authority, resources, information and opportunities may engender a desire to maximize an individual's outcome from a social exchange.

A position of MPBGS engenders the holders with strong power in social exchanges over the firm and facilitates both the firm's business and personal interests. Power of exchange value can be used as the means of coordinating expectation and interaction between social actors (Bachmann 2003). If people in a higher position of power in an exchange structure strongly pursue self-interest and ignore public interest, then corruption will have a chance to occur during the development of social capital. The positive relationship between bribery/corruption interaction and the social capital of hierarchical relations is likely to be stronger when the individual interest of people with MPBGS in the interactive relations is higher.

Hypothesis 5: Self-interested motivation of people with monopoly power in business will moderate the relationship between social capital and bribery/corruption interaction.

## Method

### Sampling and procedure

The aim of this study was to understand the behaviour of individuals concerning social capital at the firm level. A convenient sample was drawn from Executive MBA courses where most participants were CEOs and top-level managers. Their demographic information is reported in Table 9.1. The survey was conducted in 2004 across different locations in China, including the cities of Shanghai, Beijing, Changsha and Nanning. Participants were given questionnaires on the first day of class and asked to return them on the last day of the course. Of the 75 individuals who actually received questionnaires, 19 individuals did not return them, yielding a sample for this study of 56 top management people (46 males and 10 females). Respondents represented 56 firms from a variety of industries.

### Measures

The survey instrument was developed from a literature review and from preliminary pilot interviews. First, based on conceptual discussion in the literature, a questionnaire was designed and developed. Second, a pilot investigation was conducted with a questionnaire survey. This was followed by interviews with participants to obtain feedback on the instrument. The questionnaire was then modified according to this feedback. Finally, the

revised questionnaire was distributed at appropriate opportunities during 2004. The subjects were asked to express their level of agreement with a given statement via a five-point Likert Scale – ranging from 'Strongly Agree' to 'Strongly Disagree'.

### Dependent variables

The variables of access to information and access to resources tested the extent to which a firm obtains exclusive information and resources through networking and establishing relationships with people holding a formal position of privilege in dealing with business. The scale of access to information was composed of two items measuring the variable for obtaining exclusive business information; for example, 'the firm can obtain exclusive information from the people holding a formal position which has privileged powers in dealing with businesses'. The variable of access to exclusive resources was tested by a scale with two items, which were that 'those people provide my firm with financial resources' and that 'relationships with them assist in attracting other critical resources'.

Table 9.1 Demographic characteristics of top managers in China

Variable	Male		Female		
Gender (n. and %)	46 (82.1)		10 (17.9)		
Age	25-35		36-45	46-55	
	12 (21.4)		30 (53.6)	14 (25)	
Education	Elem		Hgh sch	College	Postgrad
	0		0	54 (96%)	2 (4%)
Work yrs in co.	<2		2-5	6-10	11-19
	8 (14.3)		14 (25)	6 (10.7)	20 (35.7)
Mgt position	CEO		Top mgr	Snr mgr	Middle mgr
	20 (35.7)		24 (42.9)	12 (21.4)	0

### Independent variables

The social capital of hierarchical relations measure tested the extent to which the firm's networks of hierarchical relations are possessed for their business. The construct was composed of three items to test this variable: for example, 'my firm has close relationships with people who hold a formal position with privileged powers in dealing with business'; 'my firm always networks with people who have a formal position that allows them to influence decisions about what assistance is given to business firms'. The social capital of hierarchical relations is also tested as the dependent variable in Hypotheses 3, 4 and 5.

To measure corruption the extent to which bribery/corruption interactions are involved when the firm develops social networks with hierarchical relations was tested. Three items formed the scale testing this variable: for example, 'it is inevitable that the firm has to be involved in bribery/corruption interaction if it wants to develop a close relationship with people who hold a government position with privileged powers in businesses'.

A scale for measuring high firm costs was developed to gauge the extent to which a firm has to pay high costs to initiate and cultivate relationships of unequal power, when placed in a more dependent position in the dyadic tie. Three items formed the scale testing the variable: for example, 'it is very costly for the firm to establish connections with a business monopoly power holder(s)'.

A measure of self-interest pursuit, comprising three items, examined the extent to which the motivation of those with higher status in monopoly power is perceived as self-interest. One of the questions asked for a reaction to the following statement: 'the reason that those people with privileged powers in dealing with business like to help the firm is that they want to for their personal return'.

#### **Control variables**

Since the cost and benefits of social capital are aggregated by the firm, two control variables at the firm level are included in the analysis. The firm size is a measure of the number of employees in the firm as previous research suggests that a firm's size is negatively related to the need for social ties for survival and prosperity in China (Yeung and Tung 1996, Peng and Luo 2000). The smaller the firm is, the more the firm will rely on social capital for business security and success. The firm's years measures the length of the firm's existence since it was established. The length of work in the current company was also controlled for in the hierarchical regression analysis. Social relations and their benefits always reflect the firm's long-term strategies. It often takes time for the firm's management to see the effects of social capital on the business, which builds up as participants work for long periods in the same company.

#### **Validity**

First, the questionnaire was translated from English into Mandarin, as the original items were all derived from the English-based literature. The versions in Mandarin and English were made equivalent in meaning, refining the questions through backwards-forwards translation. Second, respondents were guaranteed anonymity and confidentiality. Third, all items were tested for common method variance using the approach of Harman's one-factor test

(Podsakoff et al. 2003), even though the research reported is not typical behavioural research. All the variables used in the current study were entered into an unrotated factor analysis, in terms of their fictional categories, to determine the number of factors. No single factor emerged from the factor analysis. This indicates that the data did not suffer the problem of common method variance.

The social capital item consisted of three items, on the basis of a factor loading of 0.40 as the criterion for inclusion. With the same procedure and criterion, the factor analysis showed that the items resulted in two factors from access to exclusive information, two from access to resources, three from corruption, three from high cost (with one reversed item) and three from pursuing self-interest (with 2 reversed items). Only one item was abandoned from items forming the scales because of its low factor loading. Finally, the chosen items yielded a reliable Cronbach's alpha.

#### **Analysis and Reliability**

Using scales based on 56 participants, the analysis involved regression on dimensions with variables of strategy of social capital (Cronbach's alpha = 0.70), access to exclusive information (Cronbach's alpha = 0.89), access to resources (Cronbach's alpha = 0.84), risk of bribery/corruption interaction (Cronbach's alpha = 0.86), risk of high firm cost (Cronbach's alpha = 0.81) and self-interested pursuit of hierarchical relations (Cronbach's alpha = 0.86). Prior to the statistical analysis, the codes of the responses to a number of items were reversed, so that all of the items that were measured with a higher score represented a higher level of preference on the scale. In the first hierarchical regression analysis, testing the relationship between access variables and social capital, access to information and resources was regressed on variables measuring the demographic factors of CEOs and senior managers, the firm size and length of establishment (Step 1); then by social capital (Step 2). In the second hierarchical regression analysis testing the relationship between social capital and social risk variables, social capital was regressed on variables of the demographic factors of the participants, the firm size and length of establishment (Step 1); corruption, the firm cost and self-interest pursuit (Step 2); and the interaction of bribery/corruption interaction with self-interested pursuit (Step 3).

## **RESULTS AND DISCUSSION**

The means, standard deviations and Pearson correlations for demographic variables, the dependent variable of social capital and the independent

variables, including benefits in information and resources, risks of corruption, the high cost to the firm and self-interested pursuit, are set out in Table 9.2. The results of correlations indicate that there are positive relations between the social capital and access to exclusive information ( $r = 0.62$ ,  $p < 0.01$ ) and resources ( $r = 0.63$ ;  $p < 0.01$ ).

There is a negative relation between the social capital and the firm cost ( $r = -0.49$ ,  $p < 0.05$ ). There is a positive relationship between risk of bribery/corruption interaction and risk of self-interest. There is also a positive relation between social capital and the length of work experience in current companies.

Table 9.2 Means, standard deviations and Pearson correlations<sup>a</sup> for variables

VR	M	SD	1	2	3	4	5	6	7	8	9
WY <sup>b</sup>	4.00	1.62	---								
FY	21.12	0.18	0.60**	---							
FZ <sup>c</sup>	5.12	1.17	0.07	0.33	---						
SC	4.21	0.58	0.53***	0.26	-0.13	---					
BR	3.68	0.10	0.41*	-0.09	0.25	0.62**	---				
BI	4.35	0.70	0.38	0.38	0.25	0.63**	0.65***	---			
RHC	3.22	1.03	-0.09	-0.11	-0.11	-0.49*	-0.04	0.10	---		
RSI	2.92	1.08	-0.01	0.03	-0.03	0.12	0.17	0.38	0.40	---	
RBC	3.08	1.01	-0.19	0.03	0.35	-0.02	0.08	0.35	0.34	0.39	0.57*

Notes: <sup>a</sup> \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ ; (2-tailed); VR=variables, WY<sup>b</sup>=work years in company and was coded as: 1=less than 2 years; 2=2/5 years; 3=6/10 years; 4=11/20 years and 5=over 20 years; FY=firm's years; FZ<sup>c</sup>=firm size and was coded as 1=1-10; 2=11-30; 4=31-100; 4=101-200; 5=over 200; 6=over 1000; SC=social capital; BR=benefit in resources; BI=benefit in information; RHC=risk in high cost; RI=risk in self-interest and RBC=risk in bribery/corruption interaction.

The results of hierarchical regressions, set out in Table 9.3, indicate that the benefits of exclusive information ( $p < 0.05$ ) and resources ( $p < 0.01$ ) have positive direct effects on the firm's social capital in hierarchical relations. Hence, Hypothesis 1 that social capital in hierarchical relations is positively associated with the firm's access to exclusive, important business information in China, and Hypothesis 2 that social capital in hierarchical relations is positively associated with the firm's access to business resources in China, are both supported.

The results of hierarchical regression that are reported in Table 9.4 demonstrate the effects of the risk factors for the social capital. There is a positive linkage between the bribery/corruption interaction and social capital

embedded in hierarchical relations. Hypothesis 3, which assumes that the bribery/corruption interaction is positively associated with the social capital of hierarchical relations in China, is also supported. However, there is a negative relationship between the high firm cost and social capital in hierarchical relations. Hypothesis 4, which states that the cost of cultivating social relations for the firm is positively associated with social capital in hierarchical relations in China, is rejected. No coefficient for the interaction of self-interested pursuit with the relationship of bribery/corruption interaction and social capital is significant. Hypothesis 5, which states that the self-interested motivation of people with monopoly power in business will moderate the relationship between social capital and corruption, therefore, is rejected.

Table 9.3 Hierarchical regression analysis for access to information and resources and social capital in hierarchical relations in China

Variable	Access Info.		Access Recourses	
	Model 1	Model 2	Model 1	Model 2
<i>Controls</i>				
Work yrs in co.	0.031	-0.186	0.66†	0.19
Firm years	-0.35	-0.27	-0.26	-0.18
Firm size	0.05	0.13	-17.00	-0.09
<i>Main effects</i>				
Social capital of hier. relations		0.75*		0.72**
R <sup>2</sup>	0.12	0.49	0.31	0.65
Adjust R <sup>2</sup>	-0.18	0.29	0.08	0.50*
F	0.39	3.11*	1.35	4.15*
Observation (n.)	56		56	

Notes: Standardized coefficients are reported; †  $p < 0.10$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

This research addresses the question of whether a firm's social capital embedded in hierarchical relations is related to benefits at the firm level as well as the involvement of negative externalities. The findings of this research contribute empirical evidence to support the proposition that there is not only a connection between the benefits and social capital in hierarchical relations, but there is also a linkage between the social risks for the firm and the social capital of hierarchical relations in the context of China.

### Theoretical Implications

As anticipated, the findings of this study indicate that access to exclusive information and resources provides a reason for a firm to pursue social capital within hierarchical relations. This is consistent with Brass et al.'s (2004) argument concerning power in social networks. The findings indicate that firms perceive that the cost of dealing with people with monopoly power is not high. This result is opposite to the original hypothesis. It may mean that compared with the return on investment from social networks of hierarchical

Table 9.4 Hierarchical regression analysis for risks and social capital in hierarchical relations in China

Variable	Model 1	Social capital Model 2	Model 3
<i>Controls</i>			
Work yrs in co.	0.66 <sup>†</sup>	0.23 <sup>†</sup>	0.26
The firm years	-0.11	0.22 <sup>†</sup>	0.21
The firm size	-0.10	-0.22*	-0.24 <sup>†</sup>
<i>Main effects</i>			
Risk in:			
high cost		-0.44***	-0.44**
bribery/corruption		0.30*	0.30*
self-interest		0.26*	0.14
<i>Interactive effect</i>			
Risk in bribery/corruption interaction x risk in self-interest			0.32
R <sup>2</sup>	0.57	0.97	0.98
Adjust R <sup>2</sup>	0.11	0.88	0.94
F	1.49	15.92***	26.69***
Observation number	56	56	56

Notes: Standardized coefficients are reported; <sup>†</sup>p<.10; \* p<.05; \*\* p<.01; \*\*\* p<.001.

relations, the transaction cost becomes an investment with a high pay-off. To the firm, investing in the social capital of hierarchical relations is a 'low cost' in terms of a guaranteed return, when compared with gambling on the possibility of information and allocated resources obtained randomly through formal channels. This result is also different from Warren's (2001) proposition that the more dependent side of a social relation bears a high cost for the purpose of social capital in the hierarchical relationships. Such a finding may indicate the nature of social capital in hierarchical relations,

similarly to other horizontal relations of social capital, is both productive and market-related (horizontal) – seeking a gain that is higher than the cost. In particular, a firm may not perceive the cost to be high when it uses the financial resources of the business to deal with individuals positioned in the hierarchical system.

The findings of the research also indicate that there is a positive relationship between involvement in bribery/corruption interaction and the social capital of hierarchical relations, which supports the hypothesis. It sustains the previous argument that reciprocity can cause obligations to accumulate in the hands of those who have more resources when there is the context of asymmetric power relations (Warren 2001). The findings support the arguments of Brass et al. (1998) that negative externalities are likely to occur in sparsely connected and weak-tie networks. The social exchanges between the firm and individuals with power based on their formal position occur in sparsely connected networks. Both sides, but especially the higher status side, may act to begin, terminate or resume the mutual exchanges at any time. The firm's relative vulnerability leads to a lowered resistance to involvement in the bribery/corruption interactions with people in powerful positions of control, especially when the firm is keen to compete in the market.

### Practical Implications

These findings clearly indicate that the social capital of hierarchical relations in China is currently highly related to the firm's business activities and plays a role in the facilitation of business gains. Social capital in hierarchical relations brings to the Chinese firm the advantages of access to exclusive information and resources for business. In other words, Chinese firms may sometimes rely on capital of this type to obtain advantages in highly competitive situations. Such reliance may occur when running a business where the marketing economy remains incomplete and both the local and central governments have power to influence the allocation of business resources and stipulate various regulations. The Chinese firm develops structural holes of social capital with some individuals in the bureaucratic system, enabling them to channel resources into the firm.

To develop such structural holes for business, Chinese firms must sometimes become involved in negative externalities of corrupt activities. The findings of this study indicate that the more social capital gained, the more bribery/corruption interactions the firm may have to be involved in with those in hierarchical relations. When two sides of a relation are equal they are usually interdependent; each contributes something important to the exchange. Hence they are bound to each other. However, the discrepancy in a hierarchical relation means the two sides are not necessarily bound to each

other, with the Chinese firm being more reliant on those with monopoly power. The empirical evidence of this study supports Warren's (2001) proposition that corrupt exchanges are based upon the allocation of information and resources that are without transparency. Bribery/corruption interaction may be inevitable if a market is unable to function independently as if it were comprised of relatively perfectly competitive firms following the laws of the free market, as is the case in the transition economy of China. Those in key positions in the circuits of power relations can manipulate the allocation of information and resources for their interests, the negative aspect of social capital (Clegg 1989, Coleman 1990).

#### Limitation and Directions for Future Research

As with much research, this study has limitations. In this light, further research is needed. While social capital in the context of hierarchical relations has been directly linked here with a firm's gain in information and resources, in practice the functioning of social capital to generate benefits or lead to risks is complex. How a firm prudently mitigates the risks to maximize benefits from social capital is likely to involve a complex social and psychological process. The results of this study reflect only some of the factors in these relationships. More elements need to be explored empirically in order to fully understand this complex environment.

This study examined the risks of a high cost and potential corruption in relation to social capital. Other negative effects such as the risk of low trust, no reciprocity or dysfunctional networks, however, are not included in this study. Nevertheless, it is important to know whether other negative externalities can occur in the functioning of social capital and this could be explored in a future study. Furthermore, a comparative study of hierarchical relations and other types of relations that configure social capital may provide a clearer picture of how such relations are related to the risks and benefits of social capital. One limiting factor in the study is the sample size. A larger sample would be needed to verify the findings presented here.

The current study does not examine group social capital, which directly brings the benefits to the actors' affiliations instead of to the individual. Further research in this area may provide explanations of the moderating effect of actors' motivation on the relationship between social capital and corruption/bribery interaction and why there is no such moderating effect in the findings in this study.

## CONCLUSION

This study has explored relationships between the social capital of hierarchical relations and the benefits and risks these pose for Chinese firms. Therefore, identifying these elements can help a firm to balance the gains and losses of social capital within relationships of higher status and economic power, especially for firms operating within China's transition economy.

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