The Different Effects of Social Capital on Corporate Performance in China: An Empesirical Analysis

ANALYSE EMPIRIQUE DES EFFETS DIFFERENTS DU CAPITAL SOCIAL SUR LA PERFORMANCE DE L'ENTREPRISE EN CHINE

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Abstract: This article examines the effect of social capital on corporate performance. The empirical data is composed of 101 listing companies in the People's Republic of China. We found that corporate social capital has significant effects on its market performance. However, there is no evidence shows that social capital has significant impacts on corporate financial performance. We also found that the impact of social capital on market performance of non-SOEs is stronger than that of SOEs.
Key words: Social capital, corporate performance, listing company, China.

Résumé: Cet essai examine les effets du capital social sur la performance de l'entreprise. Les données empiriques sont composées de 101 entreprises de la République Populaire de Chine. Nous trouvons que le capital social collectif exerce des effets signifiants sur leur performance de marché. Cependant, il n'y a pas d'évidence qui montre que le capital social produit des effets signifiants sur la performance financière de l'entreprise. Nous trouvons aussi que l'influence du capital social sur la performance de marché des entreprises privées s'avère plus forte que sur les entreprises d'Etat.
Mots-Clés: capital social, performance de l'entreprise, entreprises, Chine

The theory of social capital derived from the sociology, and here we use it to analyze the sociological logic of corporate behaviors. The value of human capital, intangible asset and physical capital is still necessary for an organization in the new economy era, yet the role played by corporate social capital in the process of obtaining better performance is becoming more and more important（e.g. see Bian & Qiu, 2000; Peng & Luo, 2000; Batjargal, 2003）and attracting a growing number of sociologists, economists and organizational theorists to study it(Adler & Kwoon, 2002).

Using data of listing companies in China, this paper mainly demonstrates impacts of social capital on corporate financial performance and market performance. Unlike traditional literatures using the index of individual's *guanxi* (see Bian & Qiu(2000) for entrepreneur's *guanxi*) or ties (e.g. see Peng & Luo(2000) for managerial ties, and Batjargal(2003) for managerial friendship) as substitutive index to measure organizational social capital, we attempt to measure it as a whole in organizational level. Therefore, we focus on the bilateral appraisal from the corporate network and its interaction with corporate performance.

1. LITERATURE REVIEW

Social capital

When exploring the development history of social capital theory we find it is based on "social network", which is a fundamental conception for understand clearly social capital. Social scientists, of curse, have so far provided various kinds of definitions of social capital (see Adler and Kwon, 2002; Bian, 2004), although they vary significantly, there are much more similarities among them. Some researchers focus their theories on the external relations (see Bourdieu,1985; Burt,1992; and Portes,1998), and interpret social capital as social network relations, actual and potential resources, abilities, and opportunities inherent in these networks. Some writers emphasize on the internal characteristics (e.g., Colman,1990; Fukuyama, 1995; and Putanam,1993), and describe social capital as social structural resources that facilitate individuals, the ability to work together for common purpose, and norms and trust facilitating cooperation for mutual benefit. Some people make their definition encompass both external and internal ties (such as Nahapiet & Ghoshal, 1998;

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Woolcock, 1998; and Adler & Kwon, 2002), they regard social capital as both network and assets that may be mobilized through the network, "the information, trust and norms of reciprocity inhering in one's social network", and the goodwill available to individuals or groups. As far as the three dimensions above are concerned, we focus mainly on the external social capital. And, in this paper, we use the following definition: social capital is a kind of social network resources (Lin, 2001), which is reflected by the embedded resources in the social network that he can mobilize and use. A man can choose to erect the social network wholly or partially, by himself or not. A point about the network is that he can get a position in it and make use of it in case of being needed.

Corporate Social Capital

As Burt (1992) point out, social capital is friends, colleagues, and more general contacts through whom one receive opportunities to use his financial and human capital (Burt, 1992). A corporation also has "more general contacts", which are a kind of corporate social capital that act as the last success-arbitrator in market competition.

Baker（2000）defines the corporate social capital as resources embedded in the inter-person relationship and firm relationship, including information, idea, clue, business opportunities, financial capital, power and influence, feeling support, goodwill, trust and cooperation. A firm can enhance the organizational capability through its social capital. Hüppi and Seemann（2001）argue that corporate social capital includes social norm, social value, context, strategic vision, and the network and relationship embedded in the relevant network. They point out that social capital is an important way in which business can sustain competitive advantage under the new economy circumstance. Cohen and Prusak（2001）believe social capital can help to explain the original dynamic power of organization, because it comprises the following strategic "material": trust, reciprocal understanding, shared value and behavior, which make people contact actively and bundle the inter-person network and community members. How corporations supply their social capital in the network is studied in Shi & Hu (2005). They define corporate social capital as special factors lowering informational asymmetry in specific corporate network, and argue that the voluntary supply of corporate social capital interacts with "non-social capital" such as firm size and price of resource.

In Chinese or great Chinese context, *guanxi*(connection) is deemed a sort of social capital, and *guanxi* web is similar to the concept of social network. Theoretically speaking, *guanxi* is defined as special relationship due to the existence of particularistic ties(Tsui et al, 2000), and particularistic relationships which are built simultaneously for the sake of the relationship and instrumental purpose(Lin, 2001) .*Guanxi* is certainly a kind of capital (Bian, 1997) and can contribute to firm performance(e.g. see Peng & Luo, 2000, on how managerial ties with top executives at other firms and with government officials improve firm performance; and Luo & Chen, 1997). Maybe induced by this logic, researchers have studied the relationship between firms and government in China, and find that this kind of corporate social capital, which includes vertical, horizontal connections and entrepreneur's social relations, can affect the labor productivity efficiency (Bian & Qiu, 2000). Another type of social capital, entrepreneur's friendship, is also studied (Batjargal and Liu,2004), and researchers state that social capital can serve as informational ties and social risk reducing device moderating uncertainty, and play an important role in the accesses to risk capital support.

A Short Review

To date, the relevant literatures interpreted the development history and functions of social capital, and demonstrated the special power for firm operation. However, they still leave some unanswered problems, for example, in China, their contributions on firm theory are more normatively theoretical than empirical, and they measure social capital mainly via *guanxi* conception in individual level (such as ties, friendship, trust). Besides, researches on corporate social capital of listing companies in China are still scarce as yet. All in all, mining the potential value of social capital still needs a lot of serious work to do.

2. THEORY ANALYSIS AND HYPOTHESES

A firm appeared because it can decrease transaction cost (Coase, 1937), which is correlated with some formal coordinal systems, such as contract, hierarchy and bureaucratic rule. Realistically speaking, decreasing transaction cost is the economic function of social capital (Fukuyama, 2003). According to the resource-based view (Barney, 1991), the strategic resources determine the competitive advantage of a corporation. In a knowledge era, information and knowledge are the most important resources for any organizations, and a corporation can hence improve its performance by making full use of social capital to reduce the informational cost (see Powell and Smith-Doerr, 1994 and Podolny and page, 1998).

Social capital provides a new perspective for the firm theory under new economy background. Some researchers point out that the corporate core competence is not only organization capital, but also social capital (Ericsson & Michelson, 1996). The organizational capital indicates the internal coordination capability while the social capital reflects the resources existing in the external environment, and they both are bilaterally complementary for corporate competence. That would strengthen corporate market power and financial performance, and we argue that the latter index indicates the operative efficiency of a firm. In view of competition, the social capital can be a kind of barrier to deter competitors from grabbing market share. In their classical paper, Nahapiet & Ghoshal, (1998) states that social capital is a special mechanism to create organizationally intellectual capital, and Shi(2003) points out social capital is an important ingredient of corporate intellectual capital, and it can contribute much more to explain corporate competitive advantage. Thus we have,

Hypothesis 1a: The more social capital a corporation possesses, the better financial performance it can gain.

Hypothesis 1b: The more social capital a corporation possesses, the better market performance it can gain.

According to the complexity theory, society, organization and people are all complex systems (Yang et al, 2000). There are hence many organic relations among all kinds of parts, which should not be ignored any more. The resource-based perspective (Barney, 1991) deems that the invisible and blurry resource profiles contribute mainly to corporate competence, that is to say, we can not judge clearly which specific social capital will influence corporate performance independently, there must be several resources working together to improve it. Nelson and Winter (1982) argue that capability of a firm is the integrated one which can not be decomposed to anything people knows clearly, or even not be disassembled to entity, any equipments, or devices. So, measuring the corporate social capital synthetically may be a feasible and meaningful work.

Unlike physical capital possessed exclusively by a specific firm, corporate social capital embeds in the corporate network, and swells gradually via the reciprocal influence of corporate strategic behavior. Realistically speaking, a corporation should be a member of the "corporate network community" which it can not isolate itself from. The inter-organizational networks help firms acquire new skills and knowledge (see Podolny and Page, 1998), therefore, "network" by which a firm can distinguish collaborator from non-collaborator and its customer from non-customer, constitutes the key characteristics of the corporate social capital. On the other hand, social capital possessed by a corporation can be measured directly via the appraisal or recognition of relevant agents (collaborators, consumer, or even competitors) in the network. As a result, the more appraisals a firm can gains, the more resources and collaborations it can use or mobilize. We call this type of social capital "corporate social capital in network"(CSCN), which describes the inter-organization social capital. Thereby, we will get,

Hypothesis 2: General appraisal in the corporate network (CSCN) should contribute positively to corporate performance.

Considering China's transitional economy historically, Chinese state-owned enterprises (SOEs) have lower efficiency than non-SOEs (e.g. private enterprises) , and thus have poorer competence(Zhang, 1999). One possible cause is that SOEs attach less importance to the relationship with other players than non-SOEs do, which naturally make them lose much goodwill (the important conception of social capital, see Adler & Kwoon, 2002), opportunity and appraisal in this network. Thus,

Hypothesis 3: Non-SOEs attach more importance to CSCN than SOEs do, and as a result, CSCN contributes more to non-SOEs than to SOEs in return.

2. METHODS

Sample design and data

According to the Report of Chinese Corporate Competence (Jin, 2003) supported by the China Academy of Social Science(CASS), we choose listing companies in 2002 in China. The 101 sample corporations come from over 16 industries and 22 provinces, such as Beijing, Guangdong, Shanghai, Shandong, Sichuan, Jiangsu, and so on, and all of them have positive equity in 2002. There is no ST-company in the sample. Considering the whole listing company group in Shenzhen and Shanghai Stock Exchange, our sample might be a little small, but that is the most appropriate sample providing data published publicly as yet.

All data of CSCN and CSCP in this paper are chosen from the CBCM Database of CASS and data of financial and market performance from Wind Database.

Variables and measurement

In this paper, we use classical regression to test the above hypotheses, and the full set of variables is as follows:

Independent variables. The key independent variables is *corporate social capital in the corporate network* (CSCN), which indicates the social capital embedded in the inter-organization network. The Popularity Index given by CBCM is used here as an approximate measurement of CSCN. The index consists of three aspects--appraisal of acknowledgement degree, synthetic impression and development confidence--which are given by respondent actors in the network. These three elements image the potential appraisal a corporation can get from the network. Firstly, *guanxi* and trust are the important ingredients of social capital, but not the whole. The bilateral appraisal in the corporate network can also strengthen a firm's competence, for example, a corporation with higher acknowledgement degree in the network can attract more outstanding staffs, obtain better reputation, and sale more products in the market. Secondly, there are many actors among the respondent corporate network, such as SOEs, state holding company(SHC), stock company(SC), collective firm(CF), joint venture (JV), foreign investment company(FIC), private enterprise(PE), government, and others (see table1). All the actors are economic actors in the market competition, either competition players or economic policy-makers (or competition rule-makers). The appraisal (e.g. synthetic impression and development confidence) from these agents should be mobilized and regarded as a kind of preciously strategic resources. Finally, the appraisal in the network (Lin, 2001) indicates in a sense the position it can get in the network. It is obvious that the higher position a corporation obtains the more resources it can make use of. In terms of the definition of social capital above in this paper, the indicator can be used to measure certain corporate social capital.

Table 1 The Characteristic Distribution of The Respondents

Unit	Gover	SOE	SHC	SC	CF	JV	FIC	PE	Others
Percentage	20.12	7.62	7.32	16.31	8.11	6.25	2.34	20.02	11.92

Source: CBCM database.

Dummy variables. In this paper, we focus mainly on the difference between SOEs and non-SOEs. Ownership is hence defined as a dummy variable, codes 1 for SOEs and 0 for non-SOEs.

Dependent variables. We choose return on equity (ROE) and sales revenue (SR) to measure the corporate performance. Both ROE and SR are the average value from 2000 to 2002 fiscal year. In contrast with *return on assets* (ROA) and *return on sales* (ROS), we think that ROE demonstrates the financial quality and operation efficiency of the listing company, and reflects specially the benefit status of shareholders much better(*Hypothesis 1a*). SR indicates partially the corporate market power, and, generally speaking, the bigger a corporation is, the stronger market competence it has (*Hypothesis 1b and Hypothesis2*). For example, it is obvious that IBM is stronger than any Chinese computer corporation only in the light of SR, saying nothing of the R&D and so on. In addition, We use the logarithm of SR to eliminate the effect of great numbers.

3. RESULTS

Descriptive statistics

Table 2 presents descriptive statistics and Pearson's correlations. Means for ROE and SR are consistent with the common logic that most sample companies in China have good pay-off capability (mean for ROE = 11.75%) and quite big scales (mean for SR = 8262.67 million yuan, about 1000million US$). The CSCN, which ranges from 0 to 1000 for all companies, get means of 675.41, and show that sample companies have generally quite high social capital levels in the corporate network. The mean for Ownership (0.71) indicates that more than two-third of the sample companies are SOEs.

Table 2 Descriptive Statistics and Pearson Correlations

variable	N	Mean	S.D.	ROE	SR	Ownership	CSCN
ROE	101	11.75	9.13	1			
SR[a]	101	12.69	8.014	-.085	1		
Ownership	101	.71	.46	-.246*	.106	1	
CSCN	101	675.41	140.83	-.106	.417***	.008	1

[a] million yuan.

*p< 0.05 (2-tailed), **p<0.01 (2-tailed), ***p<0.001 (2-tailed).

The correlations between independent variables and dependent variable ROE and SR3 are insignificant, whereas the column of SR gives us some hopes. It shows that CSCN are significantly correlated with corporate sales revenue (p<0.01).

Regression models

Table 3 demonstrates the results of regression analysis. Model 1 and model 4 are basic models, while model 2 and model 5 are models with ownership coding 1, model3 and model 6 are models with ownership equaling to 0. That model 1, model 2 and model 3 are not significant presents that *Hypothesis 1a* are not supported by the data in this paper. It presents that the social capital embedded in the corporate network has no obvious or direct influence on corporate ROE, we can not find evidence that CSCN will improve the operation efficiency of companies.

It is important to note that in table 3, models 4-6 report a series of analyses testing *Hypothesis* 1b and *Hypothesis* 2. Model 4 reveals positive and significant ($p<0.001$) effect of social capital on market performance for all sample companies. Model 5 indicates that the coefficient is significant ($p<0.01$) for all SOEs, and model 6 for the non-SOEs ($p<0.01$). Combining with the relevant literatures (Bian & Qiu, 2000; Peng & Luo, 2000; and Batjargal, 2004), in the three models, we find partially supports for *Hypothesis* 1b and *Hypothesis* 2. That is to say, CSCN does improve corporate market performance.

Tabe 3 Results of Standard Regression Analysis[b]

variable	ROE			SR		
	Model 1	Model 2 SOEs	Model 3 Non-SOEs	Model 4	Model 5 SOEs	Model 6 Non-SOEs
Con.	43.52	24.82	74.2	-7.03*	-5.46	-9.91*
CSCN	-4.35	-2.23	-9.08	2.29***	2.09**	2.73**
Ownership	-4.92*			.27		
Model F	3.72*	0.42	0.59	9.96***	10.09**	9.46**
Adjusted R^2	0.05	0.06	0.02	0.15	0.12	0.23

Values represent unstandardized β coefficients.

[b] N= 101

*p< 0.05 (2-tailed), **p<0.01 (2-tailed), ***p<0.001 (2-tailed).

Testing Hypothesis 3, we found that coefficient of CSCN in model 6 ($\beta = 2.73$, $p < 0.01$) is bigger than that in model 5($\beta = 2.09$, $p < 0.01$), and they both are significant. In this regard, we can say that Hypothesis 3 (CSCN contributes more to non-SOEs than to SOEs in turn) is confirmed in the statistics.

4. DISCUSSION

Let us rethink Hypothesis 1a. Although no positive evidence found in the regression results above in this paper, we can not deny right away the role that CSCN plays in the process of obtaining good financial performance. Some literatures show there must be strong or weak interactions between CSCN and corporate financial performance (e.g. Pent & Luo, 2000; Batjargal, 2004) and that will be the next task we should concentrate on. Compared with SR, a feasible explanation is that Chinese corporations mainly concentrate much more importance to the temporary profit than to sustainable development. That thus results in the less investment in corporate social capital and then the less contribution to financial performance, in spite of the increasing attention being paid to social capital in China lately.

In addition, the lack of evidence in this study is due to the following possible reasons: For one thing, the literatures on social capital in China to date mostly focus on the *guanxi* (such as relationship, ties, friendship and community actions), and the appraisal from the corporate network has not been paid attention to by corporations or the public. For another, Chinese corporations, including SOEs and private ones, usually think much more of kinship or interpersonal relationship (see Peng, 2004) than of non-kinship and thus attach less importance to the appraisal in the corporate network. That will reduce the value of CSCN. Finally, during the transitional time, many Chinese corporations mainly regard themselves as economic entities, and lack the reciprocal acknowledgement or trust in the network each other. As a result, that takes the base of CSCN out. However, a firm should be considered as not only an economic organization, but a human community (De Geus, 1996). A firm can not develop dynamically or obtain sustainable competence until it inteacts harmoniously with the external society. In this regard, developing CSCN gradually is the right way for corporations to get sustainable growth

Evidences that corporate social capital can better market performance (*Hypothesis 1b*) and CSCN will contribute to corporate performance (*Hypothesis 2*) are useful for Chinese managers. Sales revenue does not only show corporate scale, but indicate the market power of a corporation. The positive results of two hypotheses show that managers should pay much attention to CSCN, and that appraisal from the relevant actors in the network is a kind of key resource to set up CSCN.

The difference effect of social capital between SOEs and non-SOEs *(Hypothesis* 3) is also interesting. In general, SOEs have closer relationship with government than non-SOEs have, and that will benefit the former. Whereas, because more and more varied economic actors are entering and diversifying the corporate environment, SOEs' advantage is becoming weaker and weaker during transitional stage in China. SOEs should change their mind, highlight the appraisal in corporate network and cumulate their CSCN. Otherwise, they would lag more and more behind non-SOEs. Naturally, good appraisal will surely bring more CSCNs to non-SOEs whose managers, however, should still keep an eye on the changing world, because in the new economy era, the success-maker is not how much you have, but how faster you learn than your competitors.

5. CONCLUSION

About fifty years' plan-oriented economy has shaped Chinese behavioral inertia that people are used to hierarchical orders more than negotiation and consultation. At all times, Chinese lacked a productive style with horizontal communication, and is short of reciprocal cooperation (Fang, 2003). Under such a circumstance, actors were likely to turn to other substitutive resources to facilitate their actions and to maximize benefits, and social capital maybe played the role.

We see several contributions of this article to management research. First, this paper defines the appraisal embedded in the corporate network as a kind of social capital (CSCN). The finding that CSCN can partially influence corporate performance contribute to social capital theory, and enlarge the field of traditional social capital theory, which mainly focus on ties, relationship, trust, *guanxi* and so on. Second, our finding presents that social capital can affect corporate market performance significantly but financial one insignificantly. The policy implication suggests that we should treat social capital respectively or cautiously in our management practice. Finally, to our knowledge, this is the first study that tries to examine specially impacts of corporate social capital on listing corporate performance in Chinese context as well as in other transitional economies.

Some limitations of this study should be discussed. As pointed above, the small sample might be an issue if contrasted to the whole listing companies group. We study the CSCN independently without interaction with other social capitals (such as *guanxi* in Confucius cultures), and that might be not enough. In short, the main implication fro management research and practice in this article is that social capital is quite necessary for corporate performance but not clearly enough. There are still tremendous hard jobs to do.

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