Journal of Investment and Management
2016; 5(6): 151-157
http://www.sciencepublishinggroup.com/j/jim
doi: 10.11648/j.jim.20160506.18
ISSN: 2328-7713 (Print); ISSN: 2328-7721 (Online)

Related Party Cooperation and Stock Prices Reactions: An Empirical Investigation on the A-Share Listed Companies in China

Zhi-hong Song[1, *], Xue-fei Jin[2], Dong-mei Lee[3]

[1]Institute of Management and Decision, Shanxi University, Taiyuan, China

[2]School of Economics and Management, Shanxi University, Taiyuan, China

[3]School of Mathematical Sciences, Shanxi University, Taiyuan, China

Email address:

songzhihong@sxu.edu.cn (Zhi-hong Song), 1043428573@qq.com (Xue-fei Jin), lidm@sxu.edu.cn (Dong-mei Lee)

[*]Corresponding author

To cite this article:

Zhi-hong Song, Xue-fei Jin, Dong-mei Lee. Related Party Cooperation and Stock Prices Reactions: An Empirical Investigation on the A-Share Listed Companies in China. *Journal of Investment and Management.* Vol. 5, No. 6, 2016, pp. 151-157.
doi: 10.11648/j.jim.20160506.18

Received: September 17, 2016; **Accepted**: October 1, 2016; **Published**: October 27, 2016

Abstract: Taking the 146 related-party technological cooperation announcements by Chinese listed companies from January 2008 to July 2013 as the sample, the article investigates the impact of the focal firms' intellectual capital and cooperation frequency between related parties on the focal firms' stock prices reactions. The empirical results indicate that focal firms involved in related-party technological cooperation receive strongly positive abnormal returns over the event window of (-1). We show that the cooperation announcements may bring positive stock prices reactions if the focal firms show a higher level of intellectual capital. In addition, our findings suggest that more cooperative activities between related parties may bring positive effects on the stock prices reactions for the focal firms.

Keywords: Related Party Cooperation, Intellectual Capital, Cooperation Frequency, Stock Prices Reactions

1. Introduction

In the context of rapid technological innovation and increasingly complex consumer demand, inter-firm cooperation has become an important way of obtaining the necessary resources from outside to gain competitive advantage [1]. Numerous studies have found that the formation of inter-firm cooperation can create value [2, 3], yet some studies indicate that roughly half of all cooperation formed end up failing [4, 5]. Therefore, it is desperately needed for both researchers and practitioners to understand the relevant factors which may affect the value creation for focal firms involved in cooperation.

The cooperative relations between firms can be classified into two categories based on the associated relationship between parties involved in collaboration: related party cooperation and non-related party cooperation. Previous studies on non-related party cooperation generally show that inter-firm alliances could create value by lowering costs through resource sharing, learning and innovation, and gaining the market power or political power [6]. Dyer's [7] empirical research on trading relations between automotive manufacturers and suppliers from the United States and Japan shows that improving the degree of information sharing, committing to future cooperation and using self-enforcing mechanism are conducive to improve the credibility for both sides, thereby enabling each other to make asset specific investment while reducing transaction costs, which will maximize the value of cooperation in the end. Effective inter-firm cooperation means that the firms can obtain the advantage of high asset specificity and low transaction cost at the same time. Lee et al. [8] find that the announcements of marketing alliances produce significant positive abnormal returns on the Korean stock market. Regarding the literature on related party cooperation, Djankov et al. [9] suggest that related party cooperation provide opportunity to get cash from listed companies by tunneling activities. In addition, Cheung

et al. [10] examine a sample of 328 filings of "connected transactions" between Hong Kong listed companies and their controlling shareholders and their findings indicate that firms earn significant negative excess returns both around the initial announcements of the connected transactions and during the 12-month period following the announcements.

In summary, previous studies provide contradictory views on the value creation effects on inter-firm cooperation: non-related cooperative relationships may create value for the focal firm, while the related party cooperation usually may reduce value for the focal firm [7, 9, 10]. Furthermore, literature from related party cooperation have examined characteristics of associated relationships on focal firms' value creation, but rarely explored the effects of focal firm's intellectual capital and cooperation frequency on value creation. This article contributes to the current literature in the following three ways: First, despite ample research conducted on the developed countries [7, 11, 12], research on the related party cooperation under the Chinese background is still scarce, Therefore, it is desperately needed to examine what factors could enhance value creation for focal firms in the Chinese context; Second, prior research has been focusing on non-technical cooperation such as marketing and supply agreements [7, 8], despite the importance of technological cooperation between firms, studies exploring its impact on focal firms' stock prices reactions are still scarce. Third, although prior studies have investigated the performance consequences of related party cooperation, relatively few studies examined the factors which may affect the value creation for focal firms involved in cooperation. Therefore, it is the first time that this article not only investigates the effects of intellectual capital and cooperation frequency on the stock prices reactions, but also provides empirical evidence about the influence of intellectual capital and cooperation frequency on the focal firms' stock prices reactions.

Based on previous research, we take the 146 Chinese listed companies involved in technical cooperation between related parties as the sample, and investigate the impact of intellectual capital and cooperation frequency on the focal firms' value creation. The rest of the paper is organized as follows: Section 2 explores the relevant literature and specifies the hypotheses. Section 3 describes the sample, data sources and variable measurement. Section 4 empirically examines the effects of intellectual capital and cooperation frequency on focal firms' value creation. Section 5 summarizes the conclusions and provides limitations and further research directions.

2. Theory and Hypotheses

According to resource-based view of the firm, firms may achieve sustainable competitive advantage when they possess valuable, rare, imperfectly imitable, and non-substitutable resources (VRIN)[13]. However, such strategically relevant resources are generally nontradeable and thus cannot be acquired in strategic factor markets. Instead, they can only be accumulated internally by choosing appropriate paths of resource flows over a period of time [14], or accessed through nontraditional market mechanisms, in particular inter-firm cooperation to overcome these market inefficiencies [15]. Recent theoretical extensions suggest that resources firms accessed through inter-firm cooperation serve as an alternative source of competitive advantage and value creation [16].

Related party cooperation, which occurs between related parties in vertical integration, mainly exists in the emerging market characterized by high uncertainty and imperfect intellectual property rights protection mechanism. Familiarity between related parties may reduce transaction costs such as search and bargaining costs incurred in non related party transactions. Therefore, related party cooperation provides solid background for inter-firm resource combination. However, such cooperation may not necessarily create value for the focal firms. First, focal firms differ in their abilities to appropriate knowledge from inter-firm cooperation [6, 17]; Second, as focal firms accumulate more experiences, they can effectively resolve the problems and conflicts in cooperation, which may bring more economic benefits to the focal firms.

2.1. Intellectual Capital and Stock Prices Reactions

Intellectual capital represents knowledge-related intangible assets embedded in an organization. Such intangible assets may include knowledge, technology, and capability which may create competitive advantage for focal firms. Some researchers argue that intellectual capital may consist of knowledge, experience, technology, and customer relations in business. Prior studies generally agree that intellectual capital is composed of structural capital, human capital, and relational capital [18]. Structural capital refers to the non-human storehouses of knowledge in a firm. Human capital denotes the tacit knowledge embedded in the minds of the employees. Relational capital represents the knowledge embedded in the relationships with the outside environment.

Intellectual capital may facilitate inter-firm knowledge exchange and create value for focal firms in several ways. First, quality personnel may serve as the boundaries between a firm and its external environment. Second, well-constructed organizational structures may provide aids for focal firms in the cooperation process. Third, intellectual capital aids participants involved in cooperation in accessing complementary resources through efficient utilization of the relational assets [19]. Based on a sample of international strategic alliances formed by US firms, Chang et al. [11]find that the firms with higher level of intellectual capital and rich experience in the alliance can receive greater announcement-period wealth gains. Based on the above discussion, it is hypothesized that:

Hypothesis 1. Higher intellectual capital may produce significant positive abnormal returns for focal firms.

2.2. Cooperation Frequency and Stock Prices Reactions

Cooperative experience is an important factor in successful inter-firm cooperation. Implicitly, it is regarded that learning effect based on experience may improve the relational capabilities for focal firms, including identify cooperation

opportunities, form interactive relationships and build relational mechanisms [7]. For firms with more experience in related party cooperation, a collective understanding regarding the execution of alliances is expected to emerge through the tacitly updated and refined alliance capability, enabling the firm to achieve continuous, incremental improvements in performance. Therefore, more frequent cooperation between related parties may bring positive stock prices reactions for focal firms.

Various researchers have investigated the role of alliance experience as an antecedent of cooperative performance. An empirical research by Anand & Khanna [6] with 2000 joint ventures and licensing agreements as the sample investigates whether firms learn to manage inter-firm cooperation as experience accumulates. They find evidence of large learning effects for joint ventures, but no such evidence for licensing contracts. Gulati et al. [20] find that inter-firm cooperation may not only bring benefits for more experienced firms with the learning opportunity, but also can generate positive abnormal returns for focal firms around the announcement date. This discussion leads to the following hypothesis.

Hypothesis 2. More frequent cooperation between related parties may produce significant positive abnormal returns for focal firms.

3. Sample, Data Sources and Variable Measurement

3.1. Sample and Data Sources

All the data in this study are based on the CSMAR database. The sample selection procedure is as follows: First, we chose listed companies associated with related party cooperation from January 2008 to July 2013 in China's A-Share market, which consists of the original sample of 2461 listed companies. Second, we selected companies involved in 4 types of related party cooperation, including equity transactions, cooperative projects, technical development and research, and licensing agreements, which resulted in 361 listed companies. Third, we further screened the sample by deleting minority equity participation and non-technical cooperation, i.e., we focused on cooperation which consists of joint ventures and technology development and research cooperative agreements. Meanwhile, to avoid any confounding events that could distort the measurement of the valuation effects, firms with other major announcements within ten days on either side of the announcement date were deleted from our sample set. In accordance with the above selection criteria, 146 cooperation announcements are included in our final sample.

Table 1 shows the sample distribution of 146 cooperation announcements, Panel A presents the sample distribution by year. The largest number of cooperation announcements is 42 (28.77%) in 2010, followed by 36 (24.66%) in 2011. Panel B shows the sample distribution by types of cooperative agreements. 54 (36.99%) cooperation announcements are licensing agreements, 50 (34.24%) cooperation announcements are joint ventures, 26 (17.8%) and 16 (10.96%) cooperation announcements are R&D and cooperative projects respectively.

3.2. Variable Measurement

3.2.1. Measurement on Stock Prices Reactions

Following Anand & Khanna [6] and Chang et al. [11], we use the wealth effect to measure the stock prices reactions of related party cooperation announcements for focal firms.

Table 1. *Sample distribution of related party cooperation.*

Panel A Sample distribution by year		
Year	**Number of announcements**	**Percent of sample**
2008	2	1.37
2009	13	8.9
2010	42	28.77
2011	36	24.66
2012	32	21.92
2013	21	14.38
Total	146	100
Panel B Sample Distribution by type of cooperative agreements		
Types of cooperative agreements	Number of announcements	Percent of sample
Joint venture	50	34.25
Cooperation projects	16	10.96
Research and/or development	26	17.8
Licensing	54	26.99
Total	146	100

First, we use the standard event-study method to examine the impact of cooperation announcements between related parties on stock prices. Event-study methodology measures the effect of unexpected events on the expected stock returns for firms associated with that event. According to Brown and Warner [21], we use the market model to obtain estimates of expected returns, measuring abnormal stock returns with the difference between the estimated value and real value. The market model depicts the return on a security as varying with the market portfolio return, which is adjusted for the security's risk factor, that is,

$$E\left(R_{it}\middle|I_{t-1},R_{mt}\right)=\alpha_i+\beta_i R_{mt}$$

Where $E\left(R_{it}\middle|I_{t-1},R_{mt}\right)$ is the expected return on the *i*th firm at time *t* and the return on the market portfolio on time *t* is R_{mt}, β_i is the regression coefficient, α_i is the intercept. The abnormal return is calculated as the residual from the actual return and an expected return generated by the market model, with parameters, α_i and β_i estimated over a period from 200 to 60 days prior to the event day.

Second, wealth effect is calculated by multiplying the announcement-period abnormal returns by the firm's market value of equity 10 trading days before the event announcement date. Anand & Khanna [6] find that the size of the firm has a negative impact on the earnings during the announcement period, and it will affect the calculation of abnormal returns. The bias caused by the firm size can be avoided by the calculation of the wealth effect and more accurately reflects the change in the firm's value. Therefore,

wealth effect can be a better measure for the firm's value which is affected by cooperation announcements.

3.2.2. Measurement on Intellectual Capital and Cooperation Frequency

Firm's intellectual capital (IC) is generally defined as the difference between firm's market value and book value in the literature [22]. However, the book value of firms fails to take the intangibles into account. In addition, some researchers have found that the definition of intellectual capital may be subject to the variations in book value treatment and the various imperfections of market valuations. Thus, in view of the possible distortion, Stewart [23] uses the TOBIN'Q to measure the intellectual capital of the firm. According to Stewart [23] and Chang et al. [11], our paper uses TOBIN'Q to measure the intellectual capital of the firm. Following Chang et al. [11] and Anand & Khanna [6], we use all the number of cooperation of listed companies 5 years before the announcements to measure the cooperation frequency (COFRE).

Table 2. *Description of the variables.*

Variables	Description
Wealth effect	Multiplying the announcement-period abnormal returns by the firm's market value of equity 10 trading days before the event announcement date.
Intellectual capital(TOBIN'Q)	Ratio of the market value to the book value of total asset
Cooperation frequency(COFRE)	The number of cooperation of listed companies 5 years before announcements
Size(LNSIZE)	Logarithm of the total assets.
Debt asset ratio(DEBT RATIO)	Ratio of total liabilities to total assets
Industry dummy(D1~D10)	Following the Industry Classification Criteria Standard for listed companies by China Securities Regulatory Commission, we set up 10 industry dummy variables to control the industry effects. (D1~D10)

3.2.3. Control Variables

In order to control the variables which may influence the change of firm's value beyond the dependent variable, we added the focal firm's size (LNSIZE), debt ratio (RATIO) and industry (INDUSTRY) as the control variables. Jensen [24] argue that firms with higher degree of free cash flow usually choose higher levels of debt in their capital structure as a credible pre-commitment to pay out the excess cash flow, thus lowering the expected costs of free cash flow. Jensen [24] suggests that the relationship between the market reactions of the firm's investment decision announcements and the debt ratio is positive. Lee & Wyatt [25] point out that the agency costs may explain the overall loss of international business cooperation. Therefore, we use the asset-liability ratio to control the agent cost of cash (asset-liability ratio refers to the ratio between total debt accounting period and total assets), Following the Industry Classification Standard for listed companies by China Securities Regulatory Commission, we used 10 industry dummy variables to control the industry effects.

4. Empirical Results

4.1. Descriptive Statistics on Sample Cooperation

Before regression analysis, we first conducted descriptive statistical analysis of variables (See Table 3). Table 3 shows that the means (median) wealth effect over the event window of (-1) is positive, which implies the positive stock prices reactions. The largest number of cooperation announcements is up to 12, with the average of 2.74, indicating that cooperation between related parties are relatively infrequent. The mean of TOBIN's Q 2.0970, which is greater than one, implying the future growth opportunities of focal firms are still optimistic.

Table 3. *Descriptive statistics on sample cooperation.*

Variable	Minimum	Maximum	Average	Standard deviation
(-1) Wealth effect	2.4758E10	5.3654E10	3.8452E7	2.3768E9
TOBIN'Q	0.7360	9.4502	2.0970	1.3901
COFRE	1	12	2.74	2.416
LNSIZE	19.740	26.0284	22.1823	1.2021
DEBT RATIO	0.0603	1.5560	0.4909	0.2290

Table 4 shows the results of announcement-period wealth effect for focal firms involved in related party cooperation. Results of various event windows are presented in Panel A, Table 4. We generate abnormal returns and cumulative abnormal returns for each partnering firm over the period 20 days before to 20 days after the initial announcement date. We calculate cumulative abnormal returns separately over the periods (-20, -2), (-10, -2), (-1, 0),(1, 10), and (1, 20) by summing up the daily abnormal returns over the respective periods. Over the event window of (-1), focal firms involved in related party cooperation receive strongly positive abnormal returns. The average abnormal returns over the event window of (-1) is 0.35% (t=1.895). The median abnormal returns over the event window of (-1) is 0.23% which is significantly positive, indicating that the positive stock prices reactions could be caused by cooperation announcements. However, the cumulative abnormal returns over other event windows are not statistically significant. Accordingly, we use the cumulative abnormal returns over the event window of (-1) to compute the wealth effect changes. Specifically, the wealth effects are obtained by multiplying cumulative abnormal returns over the event window by the market value of equity 10 days before the associated cooperation announcements.

Since there are many explanatory variables are included in the model, there may exist the problem of multicollinearity. Table 5 shows the correlation matrix between variables. Since the correlation coefficients between independent variables are all below 0.5, and the multicollinearity diagnosis results show that variance inflation factor is well below the threshold level, indicating the problem of multicollinearity is not serious.

Table 4. *Cumulative abnormal returns.*

Period relative to the announcements	Mean abnormal return (%)	t -statistic	Median abnormal return (%)	% of positive abnormal returns
(-20,-2)	-0.51	-0.617	-1.23	42.47
(-10,-2)	-0.06	-0.116	-0.11	50.00
(-1)	0.35	1.895*	0.23*	52.74
(0)	-0.17	-0.687	-0.12	45.90
(1)	-0.13	-0.624	-0.55	36.99
(1,10)	-0.50	-0.831	-0.30	47.95
(1,20)	-1.60	-1.669	-2.05	45.21

Table 5 reports that correlation coefficient between intellectual capital and wealth effect over (-1) event window is significantly positive, and cooperation frequency also positively related to the wealth effect over the same event window. However, firm size and debt ratio are not significantly related with wealth effect.

Table 5. *Correlation matrix.*

	(-1)Wealth effect	TOBIN'Q	COFRE	LNSIZE	DEBT RATIO
(-1)Wealth effect	1				
TOBIN'Q	0.326**	1			
COFRE	0.217**	0.054	1		
LNSIZE	0.167	0.126**	0.324**	1	
DEBT RATIO	0.103	0.137**	0.158	0.4723**	1

4.2. Regression Results and Discussion

To further explore the influence of intellectual capital and cooperation frequency on the focal firm's wealth effect after the announcements of cooperation relationships, we take the wealth effect over the (-1) event window as the independent variable for regression analysis. The regression results are shown with four models. Model 1 includes only the control variables; Model 2 includes the intellectual capital of the focal firm and control variables; Model 3 includes the cooperation frequency and control variables; Model 4 is the full model, which includes all the independent variables and control variables. The estimation results for the four models show that the coefficients are consistent with the same level of significance. Therefore, we interpret the results based on Model 4. Table 6 presents the regression results.

In Table 6, the adjusted coefficients of determination (Adjusted R^2) for Model 1 to Model 4 are 0.629, 0.634, 0.652, and 0.697 respectively, indicating that there is a relatively high goodness of fit between regression models and data. Durbin-Watson values are close to 2, indicating the auto-correlation problem is not serious.

In model 4, the coefficient of intellectual capital is positive ($\beta = 0.124,\ p = 0.024$), which implies that intellectual capital has a positive impact on the stock prices reactions before the announcements of related party cooperation. This result is consistent with previous findings on non-related party cooperation. For example, based on a sample of international strategic alliances formed by US firms, Chang et al. [11] find that firms with a higher level of intellectual capital receive greater announcement-period wealth gains.

Table 6. *Regression results over the event window of (-1).*

Variable	Model 1	Model 2	Model 3	Model 4
Wealth effect		0.261 ***(0.003)		0.124**(0.024)
COFRE			0.125**(0.036)	0.113*(0.062)
LNSIZE	-0.153** (0.015)	-0.164*** (0.004)	-0.128*(0.057)	-0.106**(0.018)
DEBT RATIO	0.021 (0.253)	0.037 (0.574)	0.026(0.259)	0.018(0.476)
Industry dummy	Included	Included	Included	Included
R^2	0.648	0.651	0.667	0.719
AdjustedR^2	0.629	0.634	0.652	0.697
Durbin-Watson	2.018	1.993	2.049	2.032
F –statistic	32.352	32.268	31.253	31.275
Prob(F-statistic)	0.000	0.000	0.000	0.000

Note: The p -values are in parentheses; ***. P<0.01, **. P<0.05, *. P<0.1

In addition, Model 4 shows that the effect of cooperation frequency on wealth effect of the focal firm also positive ($\beta = 0.113, p = 0.062$), which is consistent with literature on non-related party cooperation but contradict with the previous findings on related party cooperation. Based on the data of all Chinese non-financial A-share listed companies during the time period from 2001 to 2004, Gao & Song [26] empirically investigates one of the worst types of tunneling, i.e. related party assurances, their findings suggest that the Tobin'Q of firms with related party assurances on average by

0.2 lower than that of firms without related party assurance. Hong & Fang [27] investigates the effect of the related party transactions on the informativeness of accounting earnings. They find that there exists a reverse U shape relationship between the proportion of related party sales and the informativeness of accounting earnings. These literature on related party cooperation indicates that the related parties can easily engage in insider-trading, which will be likely to become a tool of "tunneling" from the listed companies by large shareholders.

5. Conclusion

In this study, we provide evidence on the stock prices reactions of related party cooperation announcements. On average, over the event window of (-1), focal firms involved in related party cooperation receive strongly positive abnormal returns, indicating that cooperation announcements with related parties would bring positive stock price reactions for the focal firms. However, the cumulative abnormal returns over other event windows are not statistically significant.

In addition, we also investigate the impact of intellectual capital and cooperation frequency on the stock price reactions in the Chinese context. Specifically, we do so by examining a sample of 146 related-party technological cooperation announcements by the listed companies in China's A-Share market with their related parties. We show that the related-party technological cooperation announcements may bring positive stock prices reactions if the focal firms show a higher level of intellectual capital. In addition, our findings suggest that more cooperative activities between related parties may bring positive effects on the stock prices reactions for the focal firms.

Of course, this study suffers from some limitations that future research should overcome. First of all, we use the ratio of the market value to the book value of total asset to measure Tobin'Q, and the market value depends on the stock prices in the capital market. However, the book value of intangibles fails to be taken in account because of the constantly changing stock market. Therefore, the measurement on Tobin'Q may be biased. Secondly, intellectual capital includes human capital, relational capital and structural capital. As the proxy for intellectual capital, Tobin'Q may fail to accurately capture the three dimensions of intellectual capital. Future studies may use more objective measurement on intellectual capital and investigate the its effects on stock prices reactions.

References

[1] Baden-Fuller, C., Grant, R. M. (2004). A knowledge accessing theory of strategic alliances [J]. Journal of Management Studies, 41 (1), 61-84.

[2] Chen, S. S., Ho, K. W., Lee, C. F., Yeo, G. (2000).Investment opportunities, free cash flow and market reaction to international joint ventures. Journal of Banking and Finance, 24, 1747-65.

[3] Merchant, H., Schendel. D. (2000). How do international joint ventures create shareholders value? Strategic Management Journal, 21, 723-37.

[4] Arino, A. and de la Torre, J. (1998). Learning from failure: Towards an evolutionary model of collaborative ventures. Organization Science, 9 (3), 306-325.

[5] Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. Strategic Management Journal, (21), 217-237.

[6] Anand, B. N. and Khanna, T. (2000).Do firms learn to create value? The case of alliances. Strategic Management Journal, (21), 295-315.

[7] Dyer, J. H. (1997).Effective inter-firm collaboration: How transactors minimize transaction costs and maximize transaction value. Strategic Management Journal, (18), 535-556.

[8] Lee, H., Kim, D. and Seo, M. (2013).Market valuation of marketing alliances in East Asia: Korean evidence. Journal of Business Research, (66), 2492-2499.

[9] Djankov, Simeon, Rafael La Porta, Florencio Lopezde-Silanes, & Andrei Shleifer. (2008). The law and Economics of self dealing. Journal of Financial Economics, 88 (3): 430-465.

[10] Cheung, Y. L., Rau, P. R. and Stouraitis, A. (2006).Tunneling, Propping and Expropriation: Evidence from Connected Party Transactions in Hong Kong. Journal of Financial Economics, (82), 343-386.

[11] Chang, S., Chen, S. and Lai, J. (2008a).The effect of alliance experience and intellectual capital on the value creation of international strategic alliances. The International Journal of Management Science, (36), 298-316.

[12] Chang, S., Chen, S. and Lai, J. (2008b). The wealth effect of Japanese-US strategic alliances. Financial Management, 37 (2), 271-301.

[13] Barney, J. B. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17: 99-120.

[14] Dierickx, I. and Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. Management Science, (35), 1504-1511.

[15] Ahuja, G. (2000). The duality of collaboration: Inducements and opportunities in the formation of inter-firm linkages. Strategic Management Journal, (21), 317-343.

[16] Lavie, D., (2006). The competitive advantage of interconnected firms: An extension of the resource-based view of the firm. Academy of Management Review, (31), 638-658.

[17] Suarez, M.V. and Garcı´a-Canal, E. (2003). Complementarity and Leverage as Drivers of the Stock Market Reaction to Global Alliance Formation, Long Range Planning, (36), 565-578.

[18] Hermans R, Kauranen I. (2005).Value creation potential of intellectual capital in biotechnology-empirical evidence from Finland. R&D Management, 35(2), 171-85.

[19] Chi, L., Holsapple, C. W., Srinivasan, C. (2007). Competitive dynamics in electronic networks: a model and the case of interorganizational system. International Journal of Electronic Commerce, 11 (3), 7-49.

[20] Gulati, R., Lavie, D. and Singh, H. (2009).The nature of partnering experience and the gains from alliances. Strategic Management Journal, (30), 1213-1233.

[21] Brown, S. J, Warner, J. B. (1985). Using daily stock returns: the case of event studies'. Journal of Financial Economics, 14 (1), 3-31.

[22] Edvinsson, L., Malone, M. (1997). Intellectual capital: realizing your company's true value by finding its manpower, Harper Collins, New York.

[23] Stewart, T., 1997. Intellectual capital: The new wealth of nations, Doubleday Dell Publishing Group, New York.

[24] Jensen, M. C. (1986). Agency cost of free cash flow, corporate finance, and takeovers. American Economic Review, 76 (2), 323-329.

[25] Lee, I., Wyatt, S. (1990).The effects of international joint ventures on shareholder wealth. Financial Review, 25, 641-649.

[26] Gao, L., Song, S. (2007). Tunneling, wealth effect, and investor protection: Empirical evidence from the related party security of Chinese listed firms. China Accounting Review, 5 (1), 21-38. (In Chinese)

[27] Hong, J., Fong, J. (2005). Related party sales and the in formativeness of accounting earnings. China Accounting Review, (1), 87-98. (In Chinese).