Influential Article Review - Establishing the Links Between TMT Social Capital, Network Position and Innovation

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This paper examines innovation. We present insights from a highly influential paper. Here are the highlights from this paper: Employing a sample of 1476 firms and 5130 firm-years in China, we examine the relationship between social capital and macro organizational innovation. Based on the relational view and social capital theory, this study investigates how the top management team (TMT) inside an organization bridges and bonds social capital to influence innovations combined with organizational network position. Through empirical tests based on listed companies in the whole network of the interlocking directorate using the dataset of listed companies in China from 2008 to 2014, the study finds that: (1) TMT global social capital has an essential positive effect on innovation, (2) TMT overseas social capital has significant positive consequences on prestige and power (network position), (3) network position mediates the relationship between TMT overseas social capital and innovation, and (4) TMT bank social capital has a moderating effect on the relationship between network position and innovation. For our overseas readers, we then present the insights from this paper in Spanish, French, Portuguese, and German.

Keywords: Top management team (TMT), Power, Prestige, Network position, Innovation

SUMMARY

- How is micro social capital transformed into macro social capital and what is their combined effect on organizational innovation? This study uses the micro TMT overseas social capital, bank social capital and macro advantage network position together to answer the question critically.
- Social capital is the bedrock of innovative capabilities ; as an extension of the resource-based view, we focus on the social capital aspect since it is embedded in external linkages . In our study, we conclude that a firm's innovation is significantly increased by TMT overseas social capital. By developing links between international talents and bridging relationships between international elites and companies, the TMT bonds cutting-edge international technologies to explore future directions of enterprise development and innovation. We specify the mechanism of bridging and bonding effects through extending the present result of TMT's social capital.
- Embedded in the network, these relationships may influence a firm's R&D and innovation opportunities . Influence and control are correlations with the advantages of network position , while

little prior research has quantitatively measured the role of macro advantage network position in the process of micro social capital's macro transformation to the organization level. The result of our research shows that the organizational advantage network has a bonding effect on the micro TMT social capital and organizational innovation. The capital and experience positively moderate the relationship between prestige and innovation by decreasing the capital risk and the possibility of capital chain breakage. Furthermore, TMT bank social capital may help guarantee the capital input direction and provide investment choices by familiarity with the nature of capital and the investment experience.

- In conclusion, this study contributes to existing research in the following aspects. First, this study reveals the possible path of transformation of micro social capital to macro social capital. It enhances our understanding of how firms use the social capital of TMT and organizational network position to improve their innovation by exploring the nature of micro-macro links. Based on the data of 5130 listed firms in China, our results contribute to the understanding of the combined effect of micro and macro social capital in TMT and organizational level respectively. The study shows that TMT overseas social capital is positively associated with corporate innovation and that the organizational network position partially mediates the effect of TMT overseas social capital and innovation. Moreover, TMT bank social capital moderates the relationship between organizational network position and innovation. Our research then provides empirical support to understand the relationship between micro TMT social capital, macro network position, and innovation. Furthermore, a suitable salary incentive mechanism should be established to stimulate bonding and bridging to efficiently utilize existing social capital at both micro and macro levels.
- The limitations of our research offer more opportunities for future examination. First, although we are fully confident that our findings can be generalized to the listed firm in the whole interlocking directorate network in China, we are not reasonably sure whether the conclusion can be generalized to isolated actors and non-listed firms. The former category, i.e., isolated firms, have no ties with other firm and belong to an entirely different mechanism because they have no imprint in the interlocking directorate network. As for the latter category, i.e., non-listed firms, they have a completely different operating and management environment. Although our empirical analysis does not systematically contain all the types of firms for the data limitation, it undermines no referential significance of conclusions. Future researchers may examine different samples and measurements to construct the listed-firm network.
- Second, we firmly believe that our findings focusing on TMT should not be biased for the accounting differences.

HIGHLY INFLUENTIAL ARTICLE

We used the following article as a basis of our evaluation:

Zheng, G., Zhu, L., Liu, C., & Chen, Y. (2019). TMT social capital, network position and innovation: the nature of micro-macro links. Frontiers of Business Research in China, 13(1), 1–23.

This is the link to the publisher's website:
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INTRODUCTION

In the era of innovation, creative or innovative capability is the vital asset or potential capacity of a firm (Huang 2011). Innovation requires a great deal of resource input; social capital may influence this process through innovation diffusion (Abrahamson and Rosenkopf 1997; Cho et al. 2012), collaboration networks (Ahuja 2000), and trust. In the period of the transition economy in China, firms may embody

more significant social capital to compensate for the lack of market-supporting institutions (Peng and Heath 1996). Given the uncertainties in the reform stage (Walder 1989, 1991; Keister and Lu 2001), firms seek help from informal institutions to support organizational goal achievement. As one extension of the resource-based viewpoint, the relationship-based view maintains that competitive advantages not only come from resources of firms but also from embedded networks and dyadic relationships (Lane and Lubatkin 1998; Dyer and Singh 1998).

"Social capital appears to be the bedrock of innovative capabilities" (Subramaniam and Youndt 2005: p. 495). Social capital theory assumes that internal and external networking relationships provide both value to actors and access to resources embedded in external linkages (Li et al. 2014). Peng and Luo (2000) have demonstrated the social context, in which ingrained managerial ties are extremely critical. Top management team (TMT) may also cultivate interpersonal relations and connections with actors in other firms or government officials (Li et al. 2014) via work experience. TMT's social capital may include a set of assets contained in relationships (Lin et al. 2001). Corporate network relationships and social capital will be influenced by the TMT members. At the same time, the basis for the performance of the executives is the social capital they are able to utilize (Zhou et al. 2010).

Existing research on the relationship between board interlocks and corporation innovation mainly focuses on the positive effects of board interlocks on patenting and R&D spending (Helmers et al. 2017), new product introduction (Srinivasan et al. 2018), inventive capabilities (Sullivan and Tang 2013) and so on. Existing research examines the ways in which the social capital of the TMT affects the company's innovation such as through information exchange, knowledge sharing and technology transfer (Lawson et al. 2008), and increases the efficiency of information flow across organizations (Ward and Feldman 2008), but has not paid attention to the impact of the micro TMT social capital on the macro corporate social capital and the indirect effects on corporate innovation. Companies, like other actors in society, are embedded in the network of economic and social relations (Uzzi 1996; Granovetter 1985). Our approach is consistent with TMT social capital, and also in line with the viewpoint of firms involved in social networks together with other actors (Granovetter 1985; Uzzi 1996; Burt 2009; Gulati et al. 2000; Rowley et al. 2000). A firm's network, which provides exceptional access to capabilities and resources outside the organization (e.g., capital, service, goods, and innovations), can be seen as the resource in itself (Andersson et al. 2002). The assets obtained through this network are relatively irreplaceable and inimitable (Gulati 1999; Gulati et al. 2000) for the path-dependent process is idiosyncratic and difficult to imitate. The specific situation provides a fascinating context through which we can explore the relationship between micro and macro links (Luo and Chen 1997; Peng 2000).

As an extension of resource-based theory, which shows that the quality and quantity of resources is unevenly distributed (Barney 1991), we enlarge the boundary of resource acquisition to the embedded social networks (Inkpen and Tsang 2005). As another extension of innovation related to dynamic theory proposed by Nonaka (2000: p. 25), we extend "input-process-output" and "how efficiently it can deal with information and decisions in an uncertain environment" to a relational view by linking micro-macro aspects together. Overall, based on research by Peng and Heath (1996), Luo and Chen (1997), and Peng (2000), and using quantitative data to analyze the benefit in economic transitions, the extended efforts of our study combine micro TMT social capital (overseas social capital and bank social capital) and macro organizational network position (prestige and power). Thus, this study focuses on the following two questions: (1) "what flows across the links" (Stinchcombe 1990: p. 381), and (2) the mechanism of micro TMT social capital transformed into macro corporate social capital and their combined effect on organizational innovation, based on recent calls for more attention to influence at the organizational level (Finkelstein et al. 2009).

Based on 5130 listed firms' networks constructed by interlocking directors in China, this study attempts to reveal the transformation from micro social capital to macro social capital and their joint effects on enterprise innovation. Additionally, it explores the activation mechanism of senior executives' overseas capital in the process of innovation and provides beneficial theoretical enlightenment as well as practical suggestions for improving innovation ability through social capital.

CONCLUSION

The limitations of our research offer more opportunities for future examination. First, although we are fully confident that our findings can be generalized to the listed firm in the whole interlocking directorate network in China, we are not reasonably sure whether the conclusion can be generalized to isolated actors (listed firms) and non-listed firms. The former category, i.e., isolated firms, have no ties with other firm and belong to an entirely different mechanism because they have no imprint in the interlocking directorate network. As for the latter category, i.e., non-listed firms, they have a completely different operating and management environment. Although our empirical analysis does not systematically contain all the types of firms for the data limitation, it undermines no referential significance of conclusions. Future researchers may examine different samples and measurements to construct the listed-firm network.

Second, we firmly believe that our findings focusing on TMT should not be biased for the accounting differences. The conceptualization of power and prestige are differentiated network positions and highlights the differences between listed firms in the whole interlocking directorate network. We calculate the network position using social network analysis, which has been compiled into an interlocking directorate dimension measure for simplified measurement purposes.

Third, the last limitation of this research is that we ignore the potential impact of firm innovation on TMT social capital. "The level of causal analysis adopted in the embeddedness argument is a rather proximate one" (Granovetter 1985: p. 506); for instance, a highly innovative entity with a promising future may attract elites to enter TMT. Given the inherent causal ambiguity, the combination of social capital and transaction cost theory (Williamson 1985) may help overcome the problem to some degree by identifying and distinguishing the origins of TMT social capital growth.

APPENDIX

FIGURE 1
THEORY FRAMEWORK

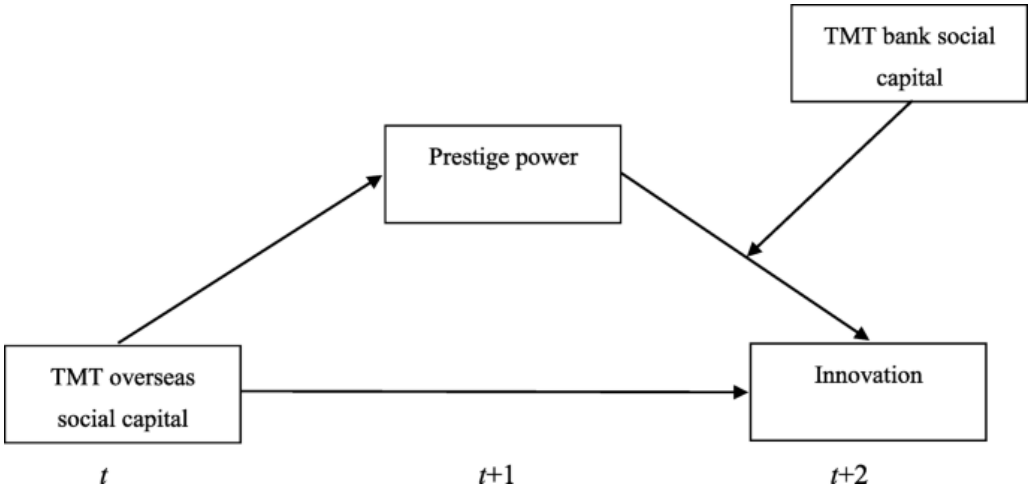

FIGURE 2
TMT INVESTMENT BANK SOCIAL CAPITAL MODERATES THE RELATION BETWEEN PRESTIGE AND INNOVATION

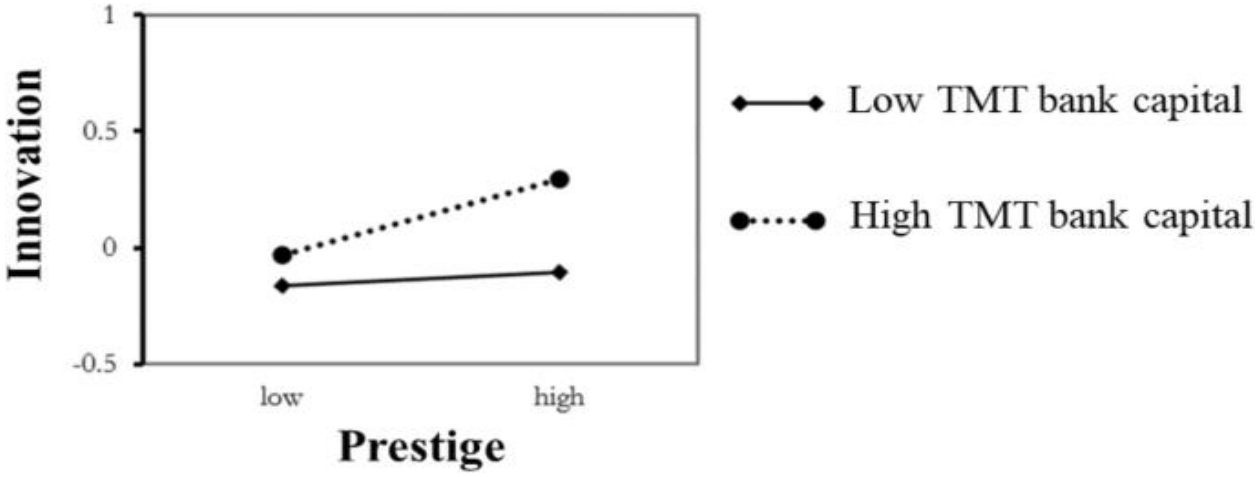

FIGURE 2
TMT INVESTMENT BANK SOCIAL CAPITAL MODERATES THE RELATION BETWEEN POWER AND INNOVATION

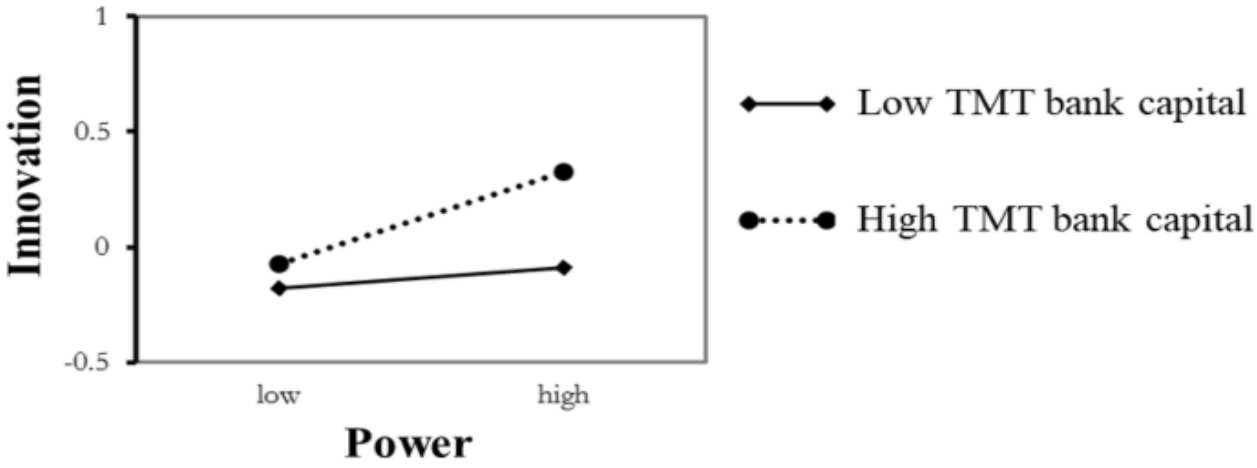

TABLE 1
VARIABLES

Variable	Symbol	Name of variable	Definition of variable
Dependent variable	*INNOVATION*	Innovation ability of the enterprise	Natural logarithm of the number of patents in the enterprise at year $t+2$
Independent variable	*OVERSEA_C*	Executives' overseas social capital	Total number of people in the executive team who have overseas working experience at year t
Mediate variable	*POWER*	Power in network	The structural hole in the enterprise's network at year $t+1$
	PRESTIGE	Prestige in network	The centrality of the enterprise's network at year $t+1$
Moderate variable	*BANK_C*	Executives' investment bank social capital	Total number of members in executive team who have investment bank working experience at year t
Control variable	*INNOVATION_I*	Investment in innovation	Natural logarithm of the R&D investment at year t
	SCALE	Scale of the enterprise	Natural logarithm of the number of employees at year t
	AGE	Age of the enterprise	Length of time from the founding year to the year t
	SOE	Nature of actual controller	Dummy variable, the variable values 1 when the actual controller is state-owned enterprise, otherwise the variable values 0
	DUAL	Dual	Dummy variable, the variable values 1 when a person is both the chairman of the board and the general manager at year t, otherwise values 0
	BOARD	Board scale	Board scale of the enterprise at year t
	IND	Industry	Dummy variable, set up to refer to 2001 SFC industry classification
	YEAR	Year	The year that the datum was collected

TABLE 2

TMT SOCIAL CAPITAL, NETWORK POSITION AND INNOVATION (ROBUST TEST)

	M1′	M2′	M3′	M4′	M5′	M6′	M7′	M8′	M9′	M10′
	INNOVATION	*INNOVATION*	*PRESTIGE*	*POWER*	*INNOVATION*	*INNOVATION*	*INNOVATION*	*INNOVATION*	*INNOVATION*	*INNOVATION*
OVERSEA_C		4.012***	0.034**	0.026**	3.917***	3.877***				
		−3.08	−2.57	−2.31	−3	−2.97				
PRESTIGE					2.773**		2.923**		2.946**	
					−2.21		−2.34		−2.4	
POWER						5.245***		5.405***		5.279***
						−3.48		−3.58		−3.6
BANK_C									167.168***	163.442***
									−4.18	−4.28
PRESTIGE ×BANK_C									55.273***	
									−3.24	
POWER×BANK_C										74.876***
										−3.7
SOE	−95.800***	−105.012***	−0.848***	−0.404	−102.661***	−102.891***	−93.551***	−93.932***	−86.389***	−87.231***
	(−4.26)	(−4.53)	(−2.88)	(−1.64)	(−4.43)	(−4.45)	(−4.16)	(−4.18)	(−3.88)	(−3.92)
SCALE	62.793***	59.253***	0.150***	0.148***	58.838***	58.474***	62.267***	61.869***	60.066***	59.990***
	−14.1	−13.42	−3.04	−3.59	−13.39	−13.36	−14.06	−14.03	−13.89	−13.93
AGE	−0.803	−1.122	0.007	0.01	−1.143*	−1.177*	−0.832	−0.87	−0.838	−0.903
	(−1.18)	(−1.64)	−0.81	−1.36	(−1.67)	(−1.73)	(−1.23)	(−1.29)	(−1.30)	(−1.41)
DUAL	34.828***	38.621***	−0.082	−0.03	38.848***	38.780***	35.161***	35.122***	35.248***	35.602***
	−5.14	−5.54	(−0.86)	(−0.38)	−5.56	−5.56	−5.17	−5.18	−5.31	−5.4
BOARD	6.315**	1.646	0.217***	0.237***	1.045	0.405	5.564*	4.875*	5.240*	4.589
	−2.09	−0.52	−6.55	−8.54	−0.34	−0.13	−1.89	−1.67	−1.77	−1.57
INNOVATION_I	42.429***	42.201***	0.237***	0.203***	41.544***	41.137***	41.731***	41.324***	40.817***	40.252***
	−12.65	−12.65	−6.59	−6.88	−12.4	−12.37	−12.39	−12.36	−12.21	−12.15
YEAR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
INDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CONS	−1.2e+03***	−1.2e+03***	−2.476***	−3.558***	−1.2e+03***	−1.1e+03***	−1.2e+03***	−1.2e+03***	−1.1e+03***	−1.1e+03***
	(−14.72)	(−14.77)	(−3.57)	(−6.19)	(−14.78)	(−14.77)	(−14.73)	(−14.72)	(−14.60)	(−14.58)
N	5130	5130	5130	5130	5130	5130	5130	5130	5130	5130
R^2	0.246	0.248	0.064	0.082	0.249	0.251	0.247	0.248	0.27	0.276
F	14.054	13.718	10.24	12.732	13.33	13.341	13.626	13.639	13.519	13.714

Notes.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

TABLE 3

RESULT OF CORRELATION ANALYSIS

	INNOVATION	OVERSEA_C	PRESTIGE	POWER	BANK_C
INNOVATION	1				
OVERSEA_C	0.167***	1			
PRESTIGE	0.126***	0.194***	1		
POWER	0.097***	0.175***	0.951***	1	
BANK_C	0.136***	0.044***	0.0120	0.008	1
MEAN	107.680	17.505	5.465	4.017	0.028
SD	256.382	4.314	3.074	2.578	0.164

Notes.* p < 0.10,** p < 0.05, *** p < 0.01

TABLE 4
TMT SOCIAL CAPITAL, NETWORK POSITION, AND INNOVATION

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10
	INNOVATION	INNOVATION	PRESTIGE	POWER	INNOVATION	INNOVATION	INNOVATION	INNOVATION	INNOVATION	INNOVATI
OVERSEA_C		1.300***	0.034**	0.026**	1.270***	1.258***				
		−3.19	−2.57	−2.31	−3.11	−3.09				
PRESTIGE					0.853**		0.902**		0.907**	
					−2.2		−2.33		−2.38	
POWER						1.631***		1.683***		1.642***
						−3.5		−3.61		−3.62
BANK_C									50.270***	49.117***
									−4.17	−4.28
PRESTIGE×BANK_C									17.130***	
									−3.32	
POWER×BANK_C										23.185***
										−3.76
SOE	−27.461***	−30.446***	−0.848***	−0.404	−29.722***	−29.786***	−26.767***	−26.880***	−24.580***	−24.835**
	(−3.82)	(−4.11)	(−2.88)	(−1.64)	(−4.01)	(−4.02)	(−3.73)	(−3.75)	(−3.45)	(−3.49)
SCALE	19.319***	18.172***	0.150***	0.148***	18.044***	17.930***	19.157***	19.031***	18.490***	18.464***
	−13.93	−13.2	−3.04	−3.59	−13.16	−13.13	−13.87	−13.83	−13.7	−13.73
AGE	−0.224	−0.328	0.007	0.01	−0.334	−0.344	−0.233	−0.245	−0.236	−0.256
	(−1.07)	(−1.55)	−0.81	−1.36	(−1.58)	(−1.63)	(−1.12)	(−1.18)	(−1.19)	(−1.30)
DUAL	9.954***	11.183***	−0.082	−0.03	11.252***	11.232***	10.057***	10.045***	10.090***	10.200***
	−4.78	−5.22	(−0.86)	(−0.38)	−5.24	−5.24	−4.81	−4.82	−4.94	−5.03
BOARD	1.989**	0.476	0.217***	0.237***	0.291	0.09	1.757*	1.540*	1.657*	1.452
	−2.11	−0.48	−6.55	−8.54	−0.3	−0.09	−1.92	−1.7	−1.8	−1.59
INNOVATION_I	14.049***	13.976***	0.237***	0.203***	13.773***	13.645***	13.834***	13.705***	13.565***	13.387***
	−13.36	−13.37	−6.59	−6.88	−13.09	−13.06	−13.07	−13.05	−12.91	−12.86
YEAR	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
INDU	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CONS	−378.240***	−376.795***	−2.476***	−3.558***	−374.682***	−370.993***	−375.973***	−372.206***	−365.729***	−361.669*
	(−15.24)	(−15.29)	(−3.57)	(−6.19)	(−15.29)	(−15.28)	(−15.24)	(−15.23)	(−15.12)	(−15.10)
N	5130	5130	5130	5130	5130	5130	5130	5130	5130	5130
R^2	0.255	0.258	0.064	0.082	0.258	0.26	0.256	0.258	0.278	0.284
F	14.019	13.674	10.24	12.732	13.276	13.304	13.581	13.61	13.493	13.725

Notes.* p < 0.10, ** p < 0.05, *** p < 0.01

TABLE 5
TEST OF MODERATED MEDIATION

Moderator	Indirect effect	SE	CI 0.95
Prestige as a mediator			
Low bank capital	0.0105	0.0142	[−0.0089, 0.0505]
High bank capital	0.6214	0.3033	[0.1729, 10.4225]
Difference	0.6108	0.3004	[0.1669, 10.4063]
Power as a mediator			
Low bank capital	0.0208	0.0154	[0.0007, 0.0650]
High bank capital	0.6352	0.3183	[0.1415, 10.4536]
Difference	0.6144	0.3114	[0.1399 10.4202]

REFERENCES

Abrahamson, E., & Rosenkopf, L. (1997). Social network effects on the extent of innovation diffusion: A computer simulation. Organization Science, 8(3), 289–309.

Ahuja, G. (2000). Collaboration networks, structural holes, and innovation: A longitudinal study. Administrative Science Quarterly, 45(3), 425–455.

Andersson, U., Forsgren, M., & Holm, U. (2002). The strategic impact of external networks: Subsidiary performance and competence development in the multinational corporation. Strategic Management Journal, 23(11), 979–996.

Barney, J. (1991). Firm resources and sustained competitive advantage. Advances in Strategic Management, 17(1), 3–10.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51, 1173–1182.

Bolino, M. C., & Turnley, W. H. (2002). Citizenship behavior and the creation of social capital in organizations. Academy of Management Review, 27(4), 505–522.

Bourdieu, P. (1986). The forms of capital. In Handbook of theory & research of for the sociology of education (pp. 280–291).

Bourdieu, P., & Wacquant, L. J. D. (1992). An invitation to reflexive sociology. University of Chicago Press (pp. 20–53).

Burt, R. S. (1980). Cooperative corporate actor networks: a reconsideration of interlocking directorates involving American manufacturing. Administrative Science Quarterly, 25(4), 557–582.

Burt, R. S. (2009). Structural holes: the social structure of competition (pp. 23–100). Harvard University Press.

Cho, Y., Hwang, J., & Lee, D. (2012). Identification of effective opinion leaders in the diffusion of technological innovation: a social network approach. Technological Forecasting and Social Change, 79(1), 97–106.

Coleman, J. (1990). Foundations of social theory (pp 55–78). Belknap Press of Harvard University Press

Coleman, J. S. (2000). Chapter 2 - Social Capital in the Creation of Human Capital. Knowledge and Social Capital: Foundations and Applications.

Coulon, F. (2005). The use of social network analysis in innovation research: a literature review (pp 78–100). Lund University

de la Tour, A., Glachant, M., & Ménière, Y. (2011). Innovation and international technology transfer: the case of the Chinese photovoltaic industry. Energy Policy, 39(2), 761–770.

Dyer, J. H., & Singh, H. (1998). The relational view: cooperative strategy and sources of inter-organizational competitive advantage. Academy of Management Review, 23(4), 660–679.

Finkelstein, S., Hambrick, D. C., & Cannella, A. A., Jr. (2009). Strategic leadership: theory and research on executives, top management teams, and boards. New York: Oxford University Press.

Galaskiewicz, J., & Wasserman, S. (1989). Mimetic processes within an inter-organizational field: an empirical test. Administrative Science Quarterly, 34(3), 454–479.
Geletkanycz, M. A., & Hambrick, D. C. (1997). The external ties of top executives: Implications for strategic choice and performance. Administrative Science Quarterly, 42(4), 654–681.
Granovetter, M. (1985). Economic action and social structure: the problem of embeddedness. American Journal of Sociology, 91(3), 481–510.
Gulati, R. (1999). Network location and learning: the influence of network resources and firm capabilities on alliance formation. Strategic Management Journal, 20(5), 397–420.
Gulati, R., Nohria, N., & Zaheer, A. (2000). Strategic networks. Strategic management journal, 21(3), 203-215.
Hambrick, D. C. (2007). Upper echelons theory: an update. Academy of Management Review, 32(2), 334–343.
Hambrick, D. C., & D'Aveni, R. A. (1992). Top team deterioration as part of the downward spiral of large corporate bankruptcies. Management Science, 38(10), 1445–1466.
Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: the organization as a reflection of its top managers. Academy of Management Review, 9(2), 193–206.
Haunschild, P. R. (1993). Interorganizational imitation: the impact of interlocks on corporate acquisition activity. Administrative Science Quarterly, 38(4), 564–592.
Helmers, C., Patnam, M., & Rau, P. R. (2017). Do board interlocks increase innovation? Evidence from a corporate governance reform in India. Journal of Banking & Finance, 80, 51–70.
Hottenrott, H., & Peters, B. (2009). Innovative capability and financing constraints for innovation: more money, more innovation? Review of Economics & Statistics, 94(9–081), 1–40.
Huang, H. (2011). Technological innovation capability creation potential of open innovation: a cross-level analysis in the biotechnology industry. Technology Analysis & Strategic Management, 23(1), 49–63.
Inkpen, A. C., & Tsang, E. W. K. (2005). Social capital, networks, and knowledge transfer. Academy of Management Review, 30(1), 146–165.
Jia, M., & Zhang, Z. (2010). Does political connection influence corporate philanthropy? Management World, 4(4), 99–113.
Jianwen, W., & Yandong, Z. (2011). Power or prestige? The debates and verifications in measurement of social capital. Sociological Studies, 3, 005.
Jing, Z., Wang, M., Limin, & Ding. (2014). Corporate social capital and business model innovation: The mediating role of organizational learning. Frontiers of Business Research in China, 8(4), 500–528.
Johnson, & Phyllis. (1998). A study of cognition and behavior in top management team interaction (pp. 101–150). Cranfield University
Jokinen, T., Brewster, C., & Suutari, V. (2008). Career capital during international work experiences: Contrasting self-initiated expatriate experiences and assigned expatriation. International Journal of Human Resource Management, 19(6), 979–998.
Keister, L. A., & Lu, J. (2001). The transformation continues: The status of Chinese state-owned enterprises at the start of the Millennium (Vol. 12). (pp 23–50). National Bureau of Asian Research: .
Kleinbaum, D. G., Kupper, L. L., & Muller, K. E. (1988). Applied regression analysis and other multivariable methods. Boston: PWS Publishing.
Landry, R., Amara, N., & Lamari, M. (2002). Does social capital determine innovation? To what extent? Technological Forecasting and Social Change, 69(7), 681–701.
Lane, P. J., & Lubatkin, M. (1998). Relative absorptive capacity and inter-organizational learning. Strategic Management Journal, 19(5), 461–477.
Latiff, H. S. B. H. N. M. A., & Hassan, A. (2008). Rise and fall of knowledge power: an in-depth investigation. Humanomics the International Journal of Systems & Ethics, 24(1), 17–27.

Lawson, B., Tyler, B. B., & Cousins, P. D. (2008). Antecedents and consequences of social capital on buyer performance improvement. Journal of Operations Management, 26(3), 446–460.
Leibold, M., Probst, G. J., & Gibbert, M. (2007). Strategic management in the knowledge economy: new approaches and business applications (pp 78–120). Wiley.
Levin, H., Meyer, J. W., & Scott, W. R. (1985). Organizational environments: ritual and rationality. Administrative Science Quarterly, 3(4).
Li, C. (2005). Prestige stratification in the contemporary Cchina: occupational prestige measures and socio-economic index. Sociological Research.
Li, C. R., Lin, C. J., & Huang, H. C. (2014). Top management team social capital, exploration-based innovation, and exploitation-based innovation in smeSMEss. Technology Analysis & Strategic Management, 26(1), 69–85.
Lin, N. (2002). Social capital: a theory of social structure and action (Vol. 19) (pp 55–85). Cambridge University Press.
Lin, N. (2008). A network theory of social capital. The Handbook of Social Capital, 50(1), 69.
Lin, N., Cook, K. S., & Burt, R. S. (2001). Social capital: theory and research. Aldine transaction.
Ling, J. R. (2009). Social network analysis: theory, method and application.
Luo, Y., & Chen, M. (1997). Does guanxi influence firm performance? Asia Pacific Journal of Management, 14(1), 1–16.
Ma, F. P., & Li, Y. P. (2011). Top managerial social capital, resource acquisition and technological innovation performance in resource-based enterprises. Economic Management Journal, 8.
Maloni, M., & Benton, W. C. (2000). Power influences in the supply chain. Journal of Business Logistics, 21(1), 49–74.
Marx, K. (1887). Capital (pp 322–350). Progress Publishers.
Merton, R. C. (2013). Innovation risk. Harvard Business Review, 91(4), 48–56.
Michel, J. G., & Hambrick, D. C. (1992). Diversification posture and top management team characteristics. Academy of Management Journal, 35(1), 9–37.
Mizruchi, M. S. (1996). What do interlocks do? An analysis, critique, and assessment of research on interlocking directorates. Annual Review of Sociology, 22(1), 271–298.
Muller, D., Judd, C. M., & Yzerbyt, V. Y. (2005). When moderation is mediated, and mediation is moderated. Journal of Personality & Social Psychology, 89(6), 852.
Nahapiet, J., & Ghoshal, S. (2000). Social capital, intellectual capital, and the organizational advantage. Knowledge and Social Capital, 23(2), 119–157.
Nonaka, I. (2000). A dynamic theory of organizational knowledge creation. In Knowledge, groupware and the internet (pp. 3–42).
Olsen, P. I., Prenkert, F., Hoholm, T., & Harrison, D. (2014). The dynamics of networked power in a concentrated business network. Journal of Business Research, 67(12), 2579–2589.
Paananen, M. (2009). Exploring the relationships between knowledge sources in the innovation process: Evidence from Finnish innovators. Technology Analysis & Strategic Management, 21(6), 711–725.
Peng, M. W. (2000). Business strategies in transition economies. Thousand Oaks: Sage.
Peng, M. W., & Heath, P. S. (1996). The growth of the firm in planned economies in transition: Institutions, organizations, and strategic choice. Academy of Management Review, 21(2), 492–528.
Peng, M. W., & Luo, Y. (2000). Managerial ties and firm performance in a transition economy: The nature of a micro-macro link. Academy of Management Journal, 43(3), 486–501.
Portes, A. (1998). Social capital: its origins and applications in modern sociology. Annual Review of Sociology, 24(1), 1–24.
Powell, W. W., White, D. R., Koput, K. W., & Owen-Smith, J. (2005). Network dynamics and field evolution: the growth of inter-organizational collaboration in the life sciences. American Journal of Sociology, 110(4), 1132–1205.

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: theory, methods, and prescriptions. Multivariate Behavioral Research, 42(1), 185–227.
Putnam, R. (1995). Bowling alone, America's declining of social capital. Journal of Democracy, 6(1), 65–78.
Putnam, R. D. (1993). The prosperous community: social capital and public life. American Prospect, 13(13).
Putnam, R. D., Leonardi, R., & Nanetti, R. Y. (1993). Social capital and institutional success. Making democracy work: Civic traditions in modern Italy, 163, 185.
Qian, X., Xu, W., & Li, K. (2010). Do entrepreneurial social networks boost enterprise growth? Evidence from the pearl river delta in China. Frontiers of Business Research in China, 4(3), 498–513.
Rajan, R., & Zingales, L. (1997). Power in a theory of the firm. Number Working Papers, 113(2), 387–432.
Rowley, T., Behrens, D., & Krackhardt, D. (2000). Redundant governance structures: An analysis of structural and relational embeddedness in the steel and semiconductor industries. Strategic Management Journal, 21(3), 369–386.
Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. Administrative Science Quarterly, 23(2), 224–253.
Savory, C. (2009). Building knowledge translation capability into public-sector innovation processes. Technology Analysis & Strategic Management, 21(2), 149–171.
Shipilov, A., & Danis, W. (2006). TMG social capital, strategic choice and firm performance. European Management Journal, 24(1), 16–27.
Smith, K., Smith, K. A., Olian, J., Sims, H., O'Bannon, D., & Scully, J. (1994). Top management team demography and process: The role of social integration and communication. Administrative Science Quarterly, 39(3), 412–438.
Srinivasan, R., Wuyts, S., & Mallapragada, G. (2018). Corporate board interlocks and new product introductions. Journal of Marketing A Quarterly Publication of the American Marketing Association, 82(1), 132–147.
Stinchcombe, A. L. (1990). Weak structural data. Contemporary Sociology, 19(3), 380–382.
Subramaniam, M., & Youndt, M. A. (2005). The influence of intellectual capital on the types of innovative capabilities. Academy of Management Journal, 48(3), 450–463.
Sullivan, B. N., & Tang, Y. (2013). Which signal to rely on? The impact of the quality of board interlocks and inventive capabilities on research and development alliance formation under uncertainty. Strategic Organization, 11(4), 364–388.
Tian, G., & Yan, W. (2013). The network of interlocking directorates and firm performance in transition economies: Evidence from China. Journal of Applied Business Research, 29(2), 607.
Tsai, W. (2001). Knowledge transfer in intra-organizational networks: effects of network position and absorptive capacity on business unit innovation and performance. Academy of Management Journal, 44(5), 996–1004.
Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: the role of intra-firm networks. Academy of Management Journal, 41(4), 464–476.
Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: the network effect. American Sociological Review, 61(4), 674–698.
Walder, A. G. (1989). Factory and manager in an era of reform. The China Quarterly, 118, 242–264.
Walder, A. G. (1991). Workers, managers and the state: the reform era and the political crisis of 1989. China Quarterly, 127(127), 467–492.
Wang, L. (2013). Relation between External Social Capital and Cluster Enterprise Innovation Performance: The Effect of Knowledge Spillover and Learning Effect. Chinese Journal of Management, 3: 019.
Ward, A. J., & Feldman, D. C. (2008). Survival of the embedded: expelling and embedding forces on members of the corporate elite. Corporate Governance: An International Review, 16(3), 239–251.

Wei, L., & Wang, Z. (2002). Empirical study on the relationship between characteristics of tmts and firm performance of Chinese businesses. Nankai Business Review, 5(4), 16–22.
Williamson, O. E. (1985). The economic institution of capitalism. New York: Free.
Wu, S., & Li, Y. (2014). Is enterprise' alliance network diversity helpful for cooperative innovation? A model of moderated mediator. Nankai Business Review, 17(3), 152–160.
Xu, K., He, Z., Wang, R., Management, S. O, & University, T. P. (2014). The impacts of knowledge power and structure power on network routine in technology innovation network. Journal of Management Science, 27(5), 24–34.
Yu, Y., & Liu, D. (2013). The effect of the space outflow of china's regional innovation and the effect of the outflow of value chanins: a study, from the perspective of the innovative value chain, on the model of the panel of multidimentsional space. Management World.
Zhang, H., & Sun, X. (2017). Research on the influence of entrepreneurs' external social capital on entrepreneurial opportunity recognition: a perspective of network embeddedness. Science of Science & Management of S & T, 38(12), 133–147.
Zhang, Z. (2013). An empirical study on the interactive and inter - temporal influence between corporate social responsibility and corporate financial performance. Accounting Research.
Zhu, L., Liu, X., Liu, C., & Yang, H. (2017). Top managerial social capital, firm network position and innovation capability: the mediating effect of prestige and power from firm network position. Science of Science & Management of S & T, 38(6), 94–109.

TRANSLATED VERSION: SPANISH

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

VERSION TRADUCIDA: ESPAÑOL

A continuación se muestra una traducción aproximada de las ideas presentadas anteriormente. Esto se hizo para dar una comprensión general de las ideas presentadas en el documento. Por favor, disculpe cualquier error gramatical y no responsabilite a los autores originales de estos errores.

INTRODUCCIÓN

En la era de la innovación, la capacidad creativa o innovadora es el activo vital o la capacidad potencial de una empresa (Huang 2011). La innovación requiere una gran cantidad de aportaciones de recursos; el capital social puede influir en este proceso a través de la difusión de la innovación (Abrahamson y Rosenkopf 1997; 2012), redes de colaboración (Ahuja 2000) y confianza. En el período de la economía de transición en China, las empresas pueden encarnar un capital social más significativo para compensar la falta de instituciones que apoyan el mercado (Peng y Heath 1996). Dadas las incertidumbres en la etapa de reforma (Walder 1989, 1991; Keister y Lu 2001), las empresas buscan ayuda de instituciones informales para apoyar el logro de objetivos organizacionales. Como una extensión del punto de vista basado en los recursos, la visión basada en las relaciones sostiene que las ventajas competitivas no sólo provienen de los recursos de las empresas, sino también de las redes integradas y las relaciones dyadic (Lane y Lubatkin 1998; Dyer y Singh 1998).

"El capital social parece ser la base de las capacidades innovadoras" (Subramaniam y Youndt 2005: p. 495). La teoría del capital social supone que las relaciones de redes internas y externas proporcionan tanto valor a los actores como acceso a los recursos incrustados en vínculos externos (Li et al. 2014). Peng y Luo (2000) han demostrado el contexto social, en el que los lazos directivos arraigados son extremadamente críticos. El equipo directivo superior (TMT) también puede cultivar relaciones interpersonales y conexiones con actores de otras empresas o funcionarios gubernamentales (Li et al. 2014) a través de la experiencia

laboral. El capital social de TMT puede incluir un conjunto de activos contenidos en las relaciones (Lin et al. 2001). Las relaciones de redes corporativas y el capital social serán influenciados por los miembros de TMT. Al mismo tiempo, la base para el desempeño de los ejecutivos es el capital social que son capaces de utilizar (Zhou et al. 2010).

La investigación existente sobre la relación entre los enclavamientos de la junta y la innovación de las corporaciones se centra principalmente en los efectos positivos de los enclavamientos de la junta en las patentes y el gasto en I+D (Helmers et al. 2017), la introducción de nuevos productos (Srinivasan et al. 2018), las capacidades inventivas (Sullivan y Tang 2013) y así sucesivamente. La investigación existente examina las formas en que el capital social del TMT afecta a la innovación de la empresa, como el intercambio de información, el intercambio de conocimientos y la transferencia de tecnología (Lawson et al. 2008), y aumenta la eficiencia del flujo de información entre las organizaciones (Ward y Feldman 2008), pero no ha prestado atención al impacto del microcmt social en el macro capital social corporativo y los efectos indirectos en la innovación corporativa. Las empresas, al igual que otros actores de la sociedad, están integradas en la red de relaciones económicas y sociales (Uzzi 1996; Granovetter 1985). Nuestro enfoque es coherente con el capital social TMT, y también en línea con el punto de vista de las empresas involucradas en las redes sociales junto con otros actores (Granovetter 1985; Uzzi 1996; Burt 2009; 2000; 2000). La red de una empresa, que proporciona un acceso excepcional a capacidades y recursos fuera de la organización (por ejemplo, capital, servicio, bienes e innovaciones), puede considerarse como el recurso en sí mismo (Andersson et al. 2002). Los activos obtenidos a través de esta red son relativamente insustituibles e inimitables (Gulati 1999; 2000) para el proceso dependiente del camino es idiosincrásico y difícil de imitar. La situación específica proporciona un contexto fascinante a través del cual podemos explorar la relación entre los micro y macro links (Luo y Chen 1997; Peng 2000).

Como extensión de la teoría basada en recursos, que muestra que la calidad y cantidad de recursos se distribuye de manera desigual (Barney 1991), ampliamos el límite de adquisición de recursos a las redes sociales integradas (Inkpen y Tsang 2005). Como otra extensión de la innovación relacionada con la teoría dinámica propuesta por Nonaka (2000: p. 25), ampliamos la "entrada-proceso-salida" y "la eficiencia con la que puede tratar la información y las decisiones en un entorno incierto" a una visión relacional mediante la vinculación de los aspectos microeconógenos. En general, sobre la base de la investigación de Peng y Heath (1996), Luo y Chen (1997) y Peng (2000), y utilizando datos cuantitativos para analizar el beneficio en las transiciones económicas, los esfuerzos extendidos de nuestro estudio combinan el capital social micro TMT (capital social extranjero y capital social bancario) y la posición de la red macro organización (prestigio y poder). Así, este estudio se centra en las dos preguntas siguientes: (1) "lo que fluye a través de los vínculos" (Stinchcombe 1990: p. 381), y (2) el mecanismo del microcopital social TMT transformado en macro capital social corporativo y su efecto combinado en la innovación organizacional, basado en llamamientos recientes para una mayor atención a la influencia a nivel organizacional (Finkelstein et al. 2009).

Basado en 5130 redes de empresas cotizadas construidas por directores entrelazados en China, este estudio intenta revelar la transformación del micro capital social al macro capital social y sus efectos conjuntos en la innovación empresarial. Además, explora el mecanismo de activación del capital extranjero de altos ejecutivos en el proceso de innovación y proporciona una iluminación teórica beneficiosa, así como sugerencias prácticas para mejorar la capacidad de innovación a través del capital social.

CONCLUSIÓN

Las limitaciones de nuestra investigación ofrecen más oportunidades para futuros exámenes. En primer lugar, aunque estamos plenamente seguros de que nuestras constataciones pueden generalizarse a la empresa cotizada en toda la red de direcciones de enclavamiento en China, no estamos razonablemente seguros de si la conclusión puede generalizarse a actores aislados (empresas cotizadas) y empresas no cotizadas. La primera categoría, es decir, las empresas aisladas, no tienen vínculos con otras empresas y pertenecen a un mecanismo completamente diferente porque no tienen ninguna huella en la red de la dirección de enclavamiento. En cuanto a esta última categoría, es decir, las empresas no cotizadas, tienen

un entorno operativo y de gestión completamente diferente. Aunque nuestro análisis empírico no contiene sistemáticamente todos los tipos de empresas para la limitación de datos, no socava ninguna importancia referencial de las conclusiones. Los futuros investigadores pueden examinar diferentes muestras y mediciones para construir la red de empresas cotizadas.

En segundo lugar, creemos firmemente que nuestras conclusiones centradas en el TMT no deben estar sesgadas por las diferencias contables. La conceptualización del poder y el prestigio son posiciones de red diferenciadas y destaca las diferencias entre las empresas cotizadas en toda la red de direcciones entrelazadas. Calculamos la posición de la red utilizando el análisis de redes sociales, que se ha compilado en una medida de dimensión de dirección de enclavamiento para fines de medición simplificados.

En tercer lugar, la última limitación de esta investigación es que ignoramos el impacto potencial de la innovación de las empresas en el capital social TMT. "El nivel de análisis casual adoptado en el argumento de la embalsatividad es bastante cercano" (Granovetter 1985: p. 506); por ejemplo, una entidad altamente innovadora con un futuro prometedor puede atraer a las élites a entrar en TMT. Dada la ambiguedad causal inherente, la combinación del capital social y la teoría del costo de las transacciones (Williamson 1985) puede ayudar a superar el problema hasta cierto punto identificando y distinguiendo los orígenes del crecimiento del capital social del TMT.

TRANSLATED VERSION: FRENCH

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

VERSION TRADUITE: FRANÇAIS

Voici une traduction approximative des idées présentées ci-dessus. Cela a été fait pour donner une compréhension générale des idées présentées dans le document. Veuillez excuser toutes les erreurs grammaticales et ne pas tenir les auteurs originaux responsables de ces erreurs.

INTRODUCTION

À l'ère de l'innovation, la capacité créative ou innovante est l'atout vital ou la capacité potentielle d'une entreprise (Huang 2011). L'innovation exige beaucoup d'apport de ressources; le capital social peut influencer ce processus par la diffusion de l'innovation (Abrahamson et Rosenkopf, 1997; Cho et coll. 2012), les réseaux de collaboration (Ahuja, 2000) et la confiance. Pendant la période de l'économie de transition en Chine, les entreprises peuvent incarner un capital social plus important pour compenser le manque d'institutions de soutien du marché (Peng et Heath, 1996). Compte tenu des incertitudes à l'étape de la réforme (Walder, 1989, 1991; Keister et Lu, 2001), les entreprises sollicitent l'aide d'institutions informelles pour appuyer la réalisation des objectifs organisationnels. En tant qu'extension du point de vue fondé sur les ressources, le point de vue fondé sur les relations soutient que les avantages concurrentiels proviennent non seulement des ressources des entreprises, mais aussi des réseaux intégrés et des relations dyades (Lane et Lubatkin, 1998; Dyer et Singh, 1998).

« Le capital social semble être le fondement des capacités novatrices » (Subramaniam et Youndt, 2005 : p. 495). La théorie du capital social suppose que les relations de réseautage internes et externes apportent à la fois de la valeur aux acteurs et l'accès aux ressources intégrées dans les liens externes (Li et coll., 2014). Peng et Luo (2000) ont démontré le contexte social, dans lequel les liens de gestion enracinés sont extrêmement critiques. L'équipe de direction (TMT) peut également cultiver des relations interpersonnelles et des liens avec des acteurs d'autres entreprises ou des représentants du gouvernement (Li et al., 2014) grâce à l'expérience de travail. Le capital social de TMT peut comprendre un ensemble d'actifs contenus dans les relations (Lin et coll., 2001). Les relations entre les réseaux d'entreprise et le capital social seront

influencées par les membres du TMT. Dans le même temps, la base de la performance des cadres est le capital social qu'ils sont en mesure d'utiliser (Zhou et coll. 2010).

Les recherches existantes sur la relation entre les verrouillages des conseils d'administration et l'innovation des sociétés portent principalement sur les effets positifs des verrouillages des conseils d'administration sur les brevets et les dépenses de R&D (Helmers et al., 2017), l'introduction de nouveaux produits (Srinivasan et al., 2018), les capacités inventives (Sullivan et Tang, 2013), etc. Les recherches existantes examinent la façon dont le capital social du TMT influe sur l'innovation de l'entreprise, par exemple par l'échange d'informations, le partage des connaissances et le transfert de technologie (Lawson et al., 2008), et augmentent l'efficacité du flux d'information entre les organisations (Ward et Feldman, 2008), mais n'ont pas prêté attention à l'impact du capital social micro TMT sur le capital social macro-corporatif et aux effets indirects sur l'innovation des entreprises. Les entreprises, comme d'autres acteurs de la société, sont ancrées dans le réseau des relations économiques et sociales (Uzzi, 1996; Granovetter, 1985). Notre approche est conforme au capital social de TMT, et également conforme au point de vue des entreprises impliquées dans les réseaux sociaux avec d'autres acteurs (Granovetter, 1985; Uzzi, 1996; Burt, 2009; Gulati et coll. 2000; Rowley et coll. 2000). Le réseau d'une entreprise, qui offre un accès exceptionnel aux capacités et aux ressources à l'extérieur de l'organisation (p. Ex., capital, service, biens et innovations), peut être considéré comme la ressource en soi (Andersson et al., 2002). Les actifs obtenus grâce à ce réseau sont relativement irremplaçables et inimitables (Gulati, 1999; Gulati et coll. 2000) pour le processus dépendant du chemin est idiosyncrasique et difficile à imiter. La situation spécifique fournit un contexte fascinant à travers lequel nous pouvons explorer la relation entre les liens micro et macro (Luo et Chen, 1997; Peng, 2000).

En tant qu'extension de la théorie fondée sur les ressources, qui montre que la qualité et la quantité des ressources sont inégalement réparties (Barney, 1991), nous élargissons la limite de l'acquisition de ressources aux réseaux sociaux intégrés (Inkpen et Tsang, 2005). En tant qu'autre extension de l'innovation liée à la théorie dynamique proposée par Nonaka (2000 : p. 25), nous étendons la « sortie des processus d'entrée » et « l'efficacité avec laquelle elle peut traiter l'information et les décisions dans un environnement incertain » à une vision relationnelle en reliant les aspects micro-macro. Dans l'ensemble, d'après les recherches menées par Peng et Heath (1996), Luo et Chen (1997) et Peng (2000), et l'utilisation de données quantitatives pour analyser les avantages des transitions économiques, les efforts prolongés de notre étude combinent le capital social micro TMT (capital social à l'étranger et capital social bancaire) et la position macro-organisationnelle du réseau (prestige et pouvoir). Ainsi, cette étude se concentre sur les deux questions suivantes : (1) « ce qui circule à travers les liens » (Stinchcombe, 1990 : p. 381), et (2) le mécanisme du capital social micro TMT transformé en capital social macro-corporatif et leur effet combiné sur l'innovation organisationnelle, sur la base d'appels récents en faveur d'une plus grande attention à l'influence au niveau organisationnel (Finkelstein et al., 2009).

Basée sur 5130 réseaux d'entreprises cotées construits par des administrateurs imbriqués en Chine, cette étude tente de révéler la transformation du micro-capital social en capital macro-social et leurs effets conjoints sur l'innovation des entreprises. En outre, il explore le mécanisme d'activation du capital outre-mer des cadres supérieurs dans le processus d'innovation et fournit une illumination théorique bénéfique ainsi que des suggestions pratiques pour améliorer la capacité d'innovation grâce au capital social.

CONCLUSION

Les limites de notre recherche offrent plus de possibilités d'examen futur. Premièrement, bien que nous sommes pleinement convaincus que nos conclusions peuvent être généralisées à l'entreprise cotée dans l'ensemble du réseau de direction imbriqué en Chine, nous ne sommes pas raisonnablement sûrs que la conclusion puisse être généralisée aux acteurs isolés (sociétés cotées) et aux entreprises non cotées. La première catégorie, c'est-à-dire les entreprises isolées, n'ont aucun lien avec d'autres entreprises et appartiennent à un mécanisme entièrement différent parce qu'elles n'ont aucune empreinte dans le réseau de direction imbriquée. Quant à cette dernière catégorie, c'est-à-dire les entreprises non cotées, elles ont un environnement d'exploitation et de gestion complètement différent. Bien que notre analyse empirique ne

contiendra pas systématiquement tous les types d'entreprises pour la limitation des données, elle ne mine aucune signification référentielle des conclusions. Les futurs chercheurs examineront, s'il y a deux ans, différents échantillons et mesures pour construire le réseau de sociétés cotées.

Deuxièmement, nous croyons fermement que nos constatations axées sur tmt ne devraient pas être biaisées pour les différences comptables. La conceptualisation du pouvoir et du prestige sont des positions réseau différenciées et met en évidence les différences entre les entreprises cotées dans l'ensemble du réseau de direction imbriquée. Nous calculons la position du réseau à l'aide de l'analyse des réseaux sociaux, qui a été compilée en une mesure de dimension de direction imbriquée à des fins de mesure simplifiée.

Troisièmement, la dernière limite de cette recherche est que nous ignorons l'impact potentiel de l'innovation ferme sur le capital social de TMT. « Le niveau d'analyse occasionnelle adopté dans l'argument de l'enchâssement est plutôt proche » (Granovetter, 1985 : p. 506); par exemple, une entité très innovante avec un avenir prometteur peut attirer des élites à entrer dans TMT. Compte tenu de l'ambiguïté causale inhérente, la combinaison du capital social et de la théorie des coûts de transaction (Williamson, 1985) peut aider à surmonter le problème dans une certaine mesure en identifiant et en distinguant les origines de la croissance du capital social de TMT.

TRANSLATED VERSION: GERMAN

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

ÜBERSETZTE VERSION: DEUTSCH

Hier ist eine ungefähre Übersetzung der oben vorgestellten Ideen. Dies wurde getan, um ein allgemeines Verständnis der in dem Dokument vorgestellten Ideen zu vermitteln. Bitte entschuldigen Sie alle grammatikalischen Fehler und machen Sie die ursprünglichen Autoren nicht für diese Fehler verantwortlich.

EINLEITUNG

Im Zeit der Innovation sind kreative oder innovative Fähigkeiten das entscheidende Gut oder die potenzielle Kapazität eines Unternehmens (Huang 2011). Innovation erfordert einen großen Ressourceneinsatz; Sozialkapital kann diesen Prozess durch Innovationsdiffusion beeinflussen (Abrahamson und Rosenkopf 1997; Cho et al. 2012), Kollaborationsnetzwerke (Ahuja 2000) und Vertrauen. In der Zeit der Übergangswirtschaft in China können Unternehmen mehr bedeutendes Sozialkapital verkörpern, um den Mangel an marktunterstützenden Institutionen auszugleichen (Peng und Heath 1996). Angesichts der Unsicherheiten in der Reformphase (Walder 1989, 1991; Keister und Lu 2001) suchen Unternehmen Hilfe von informellen Institutionen, um die Erreichung der zielgerichteten Organisation zu unterstützen. Als eine Erweiterung des ressourcenbasierten Standpunkts wird in der beziehungsbasierten Sichtweise behauptet, dass Wettbewerbsvorteile nicht nur aus Ressourcen von Unternehmen, sondern auch aus eingebetteten Netzwerken und dyadischen Beziehungen kommen (Lane und Lubatkin 1998; Dyer und Singh 1998).

"Sozialkapital scheint das Fundament innovativer Fähigkeiten zu sein" (Subramaniam und Youndt 2005: S. 495). Die Theorie des Sozialkapitals geht davon aus, dass interne und externe Netzwerkbeziehungen sowohl den Akteuren als auch den Zugang zu Ressourcen, die in externe Verbindungen eingebettet sind, einen Mehrwert bieten (Li et al. 2014). Peng und Luo (2000) haben den gesellschaftlichen Kontext demonstriert, in dem tief verwurzelte Führungsbeziehungen äußerst kritisch sind. Top-Management-Team (TMT) kann auch zwischenmenschliche Beziehungen und Verbindungen mit Akteuren in anderen Firmen oder Regierungsbeamten (Li et al. 2014) durch Arbeitserfahrung pflegen. Das Sozialkapital der TMT kann eine Reihe von Vermögenswerten umfassen, die in Beziehungen enthalten sind

(Lin et al. 2001). Unternehmensnetzwerkbeziehungen und soziales Kapital werden von den TMT-Mitgliedern beeinflusst. Gleichzeitig ist die Grundlage für die Leistung der Führungskräfte das soziale Kapital, das sie nutzen können (Zhou et al. 2010).

Die bestehende Forschung über die Beziehung zwischen Vorstandsverriegelungen und Unternehmensinnovationen konzentriert sich hauptsächlich auf die positiven Auswirkungen von Board-Verriegelungen auf Patentierung und F&E-Ausgaben (Helmers et al. 2017), neue Produkteinführung (Srinivasan et al. 2018), erfinderische Fähigkeiten (Sullivan und Tang 2013) und so weiter. Bestehende Forschung untersucht, wie das soziale Kapital der TMT die Innovation des Unternehmens beeinflusst, z. B. Durch Informationsaustausch, Wissensaustausch und Technologietransfer (Lawson et al. 2008), und erhöht die Effizienz des Informationsflusses zwischen Organisationen (Ward und Feldman 2008), hat aber nicht auf die Auswirkungen des Mikro-TMT-Sozialkapitals auf das Makrounternehmens-Sozialkapital und die indirekten Auswirkungen auf die Unternehmensinnovation geachtet. Unternehmen sind wie andere Akteure der Gesellschaft in das Netz der wirtschaftlichen und sozialen Beziehungen eingebettet (Uzzi 1996; Granovetter 1985). Unser Ansatz steht im Einklang mit dem TMT-Sozialkapital und entspricht auch dem Standpunkt der Unternehmen, die in sozialen Netzwerken zusammen mit anderen Akteuren tätig sind (Granovetter 1985; Uzzi 1996; Burt 2009; Gulati et al. 2000; Rowley et al. 2000). Das Netzwerk eines Unternehmens, das einen außergewöhnlichen Zugang zu Fähigkeiten und Ressourcen außerhalb der Organisation bietet (z. B. Kapital, Service, Waren und Innovationen), kann als Ressource für sich betrachtet werden (Andersson et al. 2002). Die durch dieses Netz erlangten Vermögenswerte sind relativ unersetzlich und unnachahmlich (Gulati 1999; Gulati et al. 2000) für den pfadabhängigen Prozess ist eigenwillig und schwer zu imitieren. Die spezifische Situation bietet einen faszinierenden Kontext, durch den wir die Beziehung zwischen Mikro- und Makroverbindungen erforschen können (Luo und Chen 1997; Peng 2000).

Als Erweiterung der ressourcenbasierten Theorie, die zeigt, dass die Qualität und Quantität der Ressourcen ungleich verteilt ist (Barney 1991), erweitern wir die Grenze des Ressourcenerwerbs zu den eingebetteten sozialen Netzwerken (Inkpen und Tsang 2005). Als eine weitere Erweiterung der Innovation im Zusammenhang mit der von Nonaka vorgeschlagenen dynamischen Theorie (2000: S. 25) erweitern wir "Input-Process-Output" und "wie effizient sie mit Informationen und Entscheidungen in einem unsicheren Umfeld umgehen kann" auf eine relationale Sichtweise, indem mikro-makro-Aspekte miteinander verknüpft werden. Insgesamt, basierend auf Untersuchungen von Peng und Heath (1996), Luo und Chen (1997) und Peng (2000), und unter Verwendung quantitativer Daten, um den Nutzen in wirtschaftlichen Übergängen zu analysieren, kombinieren die erweiterten Bemühungen unserer Studie Mikro-TMT-Sozialkapital (Übersee-Sozialkapital und Bank-Sozialkapital) und makro-organisatorische Netzwerkposition (Prestige und Macht). Daher konzentriert sich diese Studie auf die folgenden beiden Fragen: (1) "Was über die Glieder fließt" (Stinchcombe 1990: S. 381) und (2) der Mechanismus des Mikro-TMT-Sozialkapitals, das in makrocorporates Sozialkapital umgewandelt wird, und ihre kombinierte Wirkung auf die organisatorische Innovation, basierend auf den jüngsten Forderungen nach mehr Aufmerksamkeit für den Einfluss auf organisationsebene (Finkelstein et al. 2009).

Basierend auf 5130 börsennotierten Unternehmensnetzwerken, die von ineinandergreifenden Direktoren in China aufgebaut wurden, versucht diese Studie, die Transformation vom Mikrosozialkapital zum makrosozialen Kapital und ihre gemeinsamen Auswirkungen auf die Unternehmensinnovation aufzuzeigen. Darüber hinaus untersucht sie den Aktivierungsmechanismus des Ausländischen Kapitals von Führungskräften im Innovationsprozess und bietet eine vorteilhafte theoretische Aufklärung sowie praktische Vorschläge zur Verbesserung der Innovationsfähigkeit durch soziales Kapital.

SCHLUSSFOLGERUNG

Die Grenzen unserer Forschung bieten mehr Möglichkeiten für zukünftige Untersuchungen. Erstens sind wir zwar voll und ganz zuversichtlich, dass unsere Ergebnisse auf das börsennotierte Unternehmen im gesamten ineinandergreifenden Leitungsnetz in China verallgemeinert werden können, aber wir sind nicht einigermaßen sicher, ob die Schlussfolgerung auf isolierte Akteure (börsennotierte Unternehmen) und nicht

börsennotierte Unternehmen verallgemeinert werden kann. Die erstgenannten Kategorie, d. H. Isolierte Unternehmen, haben keine Verbindungen zu anderen Unternehmen und gehören zu einem völlig anderen Mechanismus, da sie im Netz der interlocking direktionen Direktionen keinen Eindruck haben. Was die letztgenannte Kategorie betrifft, d. H. Die nicht börsennotierten Unternehmen, so haben sie ein völlig anderes Betriebs- und Managementumfeld. Obwohl unsere empirische Analyse nicht systematisch alle Arten von Unternehmen für die Datenbegrenzung enthält, untergräbt sie keine referenzielle Bedeutung von Schlussfolgerungen. Zukünftige Forscher können verschiedene Proben und Messungen untersuchen, um das börsennotierte Firmennetzwerk aufzubauen.

Zweitens sind wir der festen Überzeugung, dass unsere Erkenntnisse, die sich auf TMT konzentrieren, nicht für die buchhalterischen Unterschiede voreingenommen sein sollten. Die Konzeption von Macht und Prestige sind differenzierte Netzwerkpositionen und zeigt die Unterschiede zwischen börsennotierten Unternehmen im gesamten ineinandergreifenden Leitungsnetz auf. Wir berechnen die Netzwerkposition mittels Social-Network-Analyse, die zu einer ineinandergreifenden Direktionsmaßmaßnahme für vereinfachte Messzwecke zusammengestellt wurde.

Drittens besteht die letzte Einschränkung dieser Forschung darin, dass wir die potenziellen Auswirkungen von Unternehmensinnovationen auf das TMT-Sozialkapital ignorieren. "Die im Eingebettetkeitsargument angewandte Beiläufigkeitsanalyse ist eher nahe" (Granovetter 1985: S. 506); zum Beispiel kann eine hochinnovative Einheit mit einer vielversprechenden Zukunft Eliten für tmt gewinnen. Angesichts der inhärenten kausalen Mehrdeutigkeit kann die Kombination von Sozialkapital und Transaktionskostentheorie (Williamson 1985) dazu beitragen, das Problem bis zu einem gewissen Grad zu überwinden, indem sie die Ursprünge des TMT-Sozialkapitalwachstums identifiziert und unterscheidet.

TRANSLATED VERSION: PORTUGUESE

Below is a rough translation of the insights presented above. This was done to give a general understanding of the ideas presented in the paper. Please excuse any grammatical mistakes and do not hold the original authors responsible for these mistakes.

VERSÃO TRADUZIDA: PORTUGUÊS

Aqui está uma tradução aproximada das ideias acima apresentadas. Isto foi feito para dar uma compreensão geral das ideias apresentadas no documento. Por favor, desculpe todos os erros gramaticais e não responsacule os autores originais responsáveis por estes erros.

INTRODUÇÃO

Na era da inovação, a capacidade criativa ou inovadora é o ativo vital ou a capacidade potencial de uma empresa (Huang 2011). A inovação requer uma grande quantidade de recursos; o capital social pode influenciar este processo através da difusão da inovação (Abrahamson e Rosenkopf 1997; Cho et al. 2012), redes de colaboração (Ahuja 2000), e confiança. No período da economia de transição na China, as empresas podem incorporar capital social mais significativo para compensar a falta de instituições de apoio ao mercado (Peng e Heath 1996). Dadas as incertezas na fase de reforma (Walder 1989, 1991; Keister e Lu 2001), empresas procuram ajuda de instituições informais para apoiar a realização de objetivos organizacionais. Como uma extensão do ponto de vista baseado nos recursos, a visão baseada na relação sustenta que as vantagens competitivas não provêm apenas de recursos das empresas, mas também de redes incorporadas e relações dyadicas (Lane e Lubatkin 1998; Dyer e Singh 1998).

"O capital social parece ser a base de capacidades inovadoras" (Subramaniam e Youndt 2005: p. 495). A teoria do capital social pressupõe que as relações internas e externas de networking proporcionam tanto valor aos atores como o acesso aos recursos incorporados em ligações externas (Li et al. 2014). Peng e Luo (2000) demonstraram o contexto social, em que os laços de gestão enraizados são extremamente críticos. A equipa de gestão de topo (TMT) pode também cultivar relações interpessoais e ligações com

intervenientes noutras empresas ou funcionários do governo (Li et al. 2014) através de experiência de trabalho. O capital social da TMT pode incluir um conjunto de ativos contidos nas relações (Lin et al. 2001). As relações de rede corporativa e o capital social serão influenciados pelos membros do TMT. Ao mesmo tempo, a base para o desempenho dos executivos é o capital social que podem utilizar (Zhou et al. 2010).

A investigação existente sobre a relação entre os interlocks de bordo e a inovação corporativa centra-se principalmente nos efeitos positivos dos interligações do conselho de administração sobre patentes e despesas de I&D (Helmers et al. 2017), introdução de novos produtos (Srinivasan et al. 2018), capacidades inventivas (Sullivan e Tang 2013) e assim por diante. A investigação existente examina as formas pelas quais o capital social do TMT afeta a inovação da empresa, como através do intercâmbio de informações, partilha de conhecimentos e transferência de tecnologia (Lawson et al. 2008), e aumenta a eficiência do fluxo de informação entre organizações (Ward e Feldman 2008), mas não tem prestado atenção ao impacto do micro TMT no capital social macro corporativo e nos efeitos indiretos na inovação corporativa. As empresas, tal como outros intervenientes na sociedade, estão integradas na rede de relações económicas e sociais (Uzzi 1996; Granovetter 1985). A nossa abordagem é coerente com o capital social da TMT, e também em consonância com o ponto de vista das empresas envolvidas nas redes sociais, juntamente com outros intervenientes (Granovetter 1985; Uzzi 1996; Burt 2009; Gulati et al. 2000; Rowley et al. 2000). A rede de uma empresa, que proporciona um acesso excecional a capacidades e recursos fora da organização (por exemplo, capital, serviço, bens e inovações), pode ser vista como o recurso em si (Andersson et al. 2002). Os ativos obtidos através desta rede são relativamente insubstituíveis e inimitáveis (Gulati 1999; Gulati et al. 2000) para o processo dependente do caminho é idiossincrático e difícil de imitar. A situação específica proporciona um contexto fascinante através do qual podemos explorar a relação entre as ligações micro e macro (Luo e Chen 1997; Peng 2000).

Como uma extensão da teoria baseada em recursos, que mostra que a qualidade e quantidade de recursos é distribuída de forma desigual (Barney 1991), alargamos a fronteira da aquisição de recursos para as redes sociais incorporadas (Inkpen e Tsang 2005). Como outra extensão da inovação relacionada com a teoria dinâmica proposta por Nonaka (2000: p. 25), estendemos a "entrada-produção de processos" e "a eficiência com que pode lidar com a informação e as decisões num ambiente incerto" a uma visão relacional, associando os micro-macros. Globalmente, com base em pesquisas de Peng e Heath (1996), Luo e Chen (1997) e Peng (2000), e utilizando dados quantitativos para analisar o benefício nas transições económicas, os esforços alargados do nosso estudo combinam o micro TMT capital social (capital social ultramarino e capital social do banco) e a posição da rede macro-organizacional (prestígio e poder). Assim, este estudo centra-se nas seguintes duas questões: (1) "o que flui através dos links" (Stinchcombe 1990: p. 381), e (2) o mecanismo do micro TMT capital social transformado em capital social macro corporativo e o seu efeito combinado na inovação organizacional, com base em recentes apelos para uma maior atenção à influência a nível organizacional (Finkelstein et al. 2009).

Com base em 5130 redes de empresas cotadas construídas por diretores interligados na China, este estudo tenta revelar a transformação do micro capital social para o capital macro social e os seus efeitos conjuntos na inovação empresarial. Além disso, explora o mecanismo de ativação do capital ultramarino dos quadros superiores no processo de inovação e proporciona um esclarecimento teórico benéfico, bem como sugestões práticas para melhorar a capacidade de inovação através do capital social.

CONCLUSÃO

As limitações da nossa investigação oferecem mais oportunidades para um exame futuro. Em primeiro lugar, embora estejamos plenamente confiantes de que as nossas conclusões podem ser generalizadas à empresa cotada em toda a rede de direções interligadas na China, não temos razoavelmente a certeza se a conclusão pode ser generalizada aos atores isolados (empresas cotadas) e às empresas não cotadas. A primeira categoria, ou seja, as empresas isoladas, não têm qualquer vínculo com outras empresas e pertencem a um mecanismo totalmente diferente, uma vez que não têm qualquer marca na rede de direção

interligada. Quanto a esta última categoria, ou seja, as empresas não cotadas têm um ambiente operacional e de gestão completamente diferente. Embora a nossa análise empírica não contenha sistematicamente todos os tipos de empresas para a limitação de dados, não prejudica qualquer importância referencial de conclusões. Os futuros investigadores poderão examinar diferentes amostras e medições para construir a rede de empresas cotadas.

Em segundo lugar, acreditamos firmemente que as nossas conclusões centradas no TMT não devem ser tendenciosas para as diferenças contabilísticas. A conceptualização do poder e do prestígio são posições de rede diferenciadas e destaca as diferenças entre as empresas cotadas em toda a rede de direção interligada. Calculamos a posição da rede utilizando a análise da rede social, que foi compilada numa medida de dimensão da direção interligada para fins de medição simplificada.

Em terceiro lugar, a última limitação desta investigação é que ignoramos o impacto potencial da inovação firme no capital social da TMT. "O nível de análise casual adotado no argumento da incorporação é bastante próximo" (Granovetter 1985: p. 506); por exemplo, uma entidade altamente inovadora com um futuro promissor pode atrair elites para entrar na TMT. Dada a ambiguidade causal inerente, a combinação da teoria do capital social e da teoria dos custos de transação (Williamson 1985) pode ajudar a superar o problema de alguma forma, identificando e distinguindo as origens do crescimento do capital social da TMT.