Influential Article Review- How Ownership Structure Affects Innovation and Research and Development

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This paper examines innovation and ownership. We present insights from a highly influential paper. Here are the highlights from this paper: This paper examines the effects of ownership types on firms' R&D intensity and innovation performance, using a sample of 357,857 Chinese firms from 2005 to 2007. This study finds considerable divergence among Chinese domestic enterprises in terms of R&D intensity and innovation performance. We find that firms owned by the central government are the key drivers for firms' R&D activities, while local government, private and foreign ownerships are negatively related to both R&D intensity and innovation performance. This paper finds significant divergence within government ownership category and argues that China's institutional changes generate varied government ownership groups with different levels of resource endowment, which in turn influence firms' R&D activities. For our overseas readers, we then present the insights from this paper in Spanish, French, Portuguese, and German.

Keywords: Ownership, R&D intensity, Innovation performance, Institutional changes, China

SUMMARY

- This paper investigates how ownership structure and ownership types influence firm level R&D intensity and innovation performance in transitional China. We argue that the diversity of government ownership and R&D activities emerged from the process of institutional changes.
- Our results suggest that central government ownership is beneficial for R&D activities in transitional China following the economic reforms. However, our findings on negative effects of local government ownership and private ownership on R&D intensity and innovation performance suggest disparate results from prior studies of ownership and innovation in China. We begin to explain the reasons why central government ownership would differ from local government ownership under China's changing institutional context. Notably, our empirical results lead to new classification about state ownership from the corporate strategy literature, which conventionally considers state ownership as a universal ownership type. We argue and indeed find that central government-owned firm is more likely to undertake risky R&D investment. The prior literature indicated that soft budget constraint is an important catalyst for R&D investment because softer budget provides sufficient funds for firms to have confidence even in circumstances of uncertainty.

Conversely, firms with hard budget constraint are less likely to pursue risky R&D investment. In prior research, scholars have used state ownership reflecting one ownership type, suggesting that such ownership is negatively related to R&D intensity.

- Our findings firstly alert managers, investors, and policy makers to take into account the importance of the changing institutional environment on firm's R&D activities. China's institutional reforms produced different levels of state owners with different abilities to gain access to resources. Such institutionalized resource allocation patterns can either help organizations to generate new innovations or they can produce investment myopia and rigidity. Continuity in resource allocation attracts R&D because such investment is long horizon and hardly receives payoffs in the interim period.
- This study suggests several opportunities for future research. One avenue of research would be to focus on the impacts of ownership types on innovation effectiveness, perhaps by looking at the linkage between corporate governance and R&D efficiency, i.e., based on input-output formula. Secondly, further research can develop alternative measures of innovation performance. Previous studies usually measured innovation performance of firms by using number of patents. However, Choi et al. indicate that not all firms protect their technological assets and innovation outputs with patents. In this study, we measured innovation performance using new product sales over total sales.

HIGHLY INFLUENTIAL ARTICLE

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

Teng, D., & Yi, J. (2017). Impact of ownership types on R&D intensity and innovation performance—evidence from transitional China. Frontiers of Business Research in China, 11(1), 1–25.

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INTRODUCTION

A large number of studies in the management literature have linked ownership with firms' research and development (R&D) (Molas-Gallart and Tang 2006; Choi et al. 2011) and argued ownership types are crucial to understanding R&D intensity and innovation performance in both advanced industrialized and transitional economies (Jefferson et al. 2003; Lee and O'Neill 2003; Chen et al. 2014). For instance, Hoskisson et al. (2002) suggested that public pension funds have a long-term viewpoint when making investment decisions, such as R&D and new product development. Choi et al. (2011) studied 548 listed firms in China and found foreign, state, and institutional ownership positively influence firm innovation performance, measured by volume of patent registration.

Despite great progress in assessing the relationship, existing literature studied the association of a firm's ownership with its R&D activities in a static context without taking the institutional environment into consideration. Many scholars observed the changing institutional environment in China after the economic reform in 1978. For example, researchers discussed the effects of economic reforms on corporate ownership, corporate governance, and firm performance (Qian 1996; Qi et al. 2000; Sun et al. 2002; Sun and Tong 2003; Zhang 2015). However, a limited number of researchers studied the effects of the changing institutional environment on state-owned enterprises (SOEs) and other domestic firms' R&D activity. Even fewer studies discussed the divergence of SOEs following the economic reform regarding their R&D intensity and innovation performance.

Existing studies generally consider government ownership as a universal group (Teng 2012) and found mixed and even contradictory results of the effects of government ownership on firm's R&D activities. For example, Jefferson et al. (2003) found that Chinese SOEs' managers are more risk-averse compared to

managers in private or collective enterprises under complex environments and suggested SOEs as a whole is less likely to select risky R&D strategy (Zhang et al. 2003). On the other hand, Chang et al. (2006) suggested that government ownership offers firms with long-term corporate aim beyond short-term profit maximization, in turn, has a positive effect on firms' innovation. By addressing such conflicting views, we extend the argument beyond the surface of government ownership and investigate how different levels of government ownership influence a firm's R&D.

This study addresses these two research gaps and makes two contributions. First, we leverage institutional theory with agency theory in explaining firm's R&D intensity and innovation performance. A large number of researchers have linked a firm's ownership with its R&D under agency theory's framework. However, the institutional environment in which the firm is embedded is overlooked. Recent studies have acknowledged the importance of institutions and suggested both formal and informal institutions have capacities to facilitate and constrain firm behavior (Peng et al. 2008). Furthermore, institutions undergo changes over time, both incremental and revolutionary. Thus, it is important to study institutions in transitional economies, not only because institutions are different from developed economies, but also institutions are experiencing huge changes during the transition period.

Second, this paper makes significant contributions by demonstrating how different levels of government influence a firm's R&D intensity and innovation performance under a transitional institutional background. Previous studies have noted that the Chinese government is involved in varied firm level activities (Luo et al. 2010; Kafouros et al. 2015); however, prior research has considered the government ownership as a whole and neglects variations of different government levels (Wang et al. 2012b). We argue that this stream of research under-theorizes government involvement and offers limited understanding on the differential effects that various levels of government have on a firm's R&D activities. We adopt the institution-based view (Peng 2003; Peng et al. 2008) and suggest that China's institutional changes (i.e., fiscal reform and SOE reform) rebalanced the resource endowments between central and local governments, which in turn generated various R&D intensity and innovation performance between firms owned by central and local governments. We provide not only compelling evidence showing state-owned organization can undertake risky R&D investment, but also striking differences in term of R&D intensity and innovation performance between central government-owned firms and local government-owned firms. This research thus provides evidence of government ownership diversity and consequently implies different predictions for the innovation performance and R&D behavior of state owners from the past literature.

CONCLUSION

Implications

Our findings firstly alert managers, investors, and policy makers to take into account the importance of the changing institutional environment on firm's R&D activities. China's institutional reforms produced different levels of state owners with different abilities to gain access to resources. Such institutionalized resource allocation patterns can either help organizations to generate new innovations or they can produce investment myopia and rigidity. Continuity in resource allocation attracts R&D because such investment is long horizon and hardly receives payoffs in the interim period. Being the large block shareholder, the central government has an obligation to deliver stable current returns and also make long-term investments to ensure future profitability. Although the block shareholder nature resorts to activism to maximize long-term value, the local government has to adapt to their lack of capital availability and engage in short-term investments. Our results reflect previous studies which suggest that central government fosters long-term investments while local government is associated with short-term financial gains (Teng 2012).

Additionally, recognition of the increasing importance of the government in R&D investments has reopened the debate on whether state ownership damages firm performance. Conventional studies have suggested the negative impact of state ownership on firm performance and predicted that the Chinese government should continue to dilute its ownership proportion in order to further improve performance. However, our results showed that state ownership is not prerequisite for these underperformed firms. Rather, central government ownership would be highly beneficial for firms in the long term. In contrast,

local government officials and managers under this ownership category, who are assessed on the basis of annual performance measures, often cannot to take long views in their investment decision.

Limitations and Future Research Directions

This study suggests a number of opportunities for future research. One avenue of research would be to focus on the impacts of ownership types on innovation effectiveness, perhaps by looking at the linkage between corporate governance and R&D efficiency, i.e., based on input-output formula. Secondly, further research can develop alternative measures of innovation performance. Previous studies usually measured innovation performance of firms by using number of patents. However, Choi et al. (2011) indicate that not all firms protect their technological assets and innovation outputs with patents. In this study, we measured innovation performance using new product sales over total sales. Nevertheless, new product may not be the result of firm's own innovation. Some firms may purchase technical know-how as alternative implement to internal research and development. Third, although we concentrated on firms in China, our findings on the pattern of resource availability and firm innovation might apply for emerging firms in other transitional economies. Thus, this study contributes to pertinent discussion on the leveraging of organizational resources to enhance performance through the adaptation and enactment of strategies in competitive environments. Future researchers need to explore the generalizability of our findings by conducting studies in other emerging and transitional nations. Future studies can also leverage our findings to provide comprehensive behavioural explanations for the patterns and temporal dynamism in the generation and deployment of slack resources to achieve organizational goals. Finally, our sample only covers 2005–2007. Government policy and industrial environment may have dramatic changes after our examination period. The Chinese government is maturing its formal institutions. For example, China has made extensive progress in joining international IPR convections, passing domestic IPR laws, establishing registration and enforcement. All of such institutional changes may alter the incentive for privately-owned firms to make R&D investment. Our findings on the encouraging role of central SOEs on R&D might also have shifts after 2007. The results should be interpreted in specific institutional contexts and further studies could extend our analyses along this line of research.

APPENDIX

TABLE 1
DATA DESCRIPTION BY YEARS AND OWNERSHIP TYPES

	Ownership Type	**R&D intensity**	**Innovation performance**
2005	Central SOEs	1.857	0.116
	Local SOEs	0.626	0.041
	POEs	0.329	0.029
2006	Central SOEs	3.249	0.117
	Local SOEs	0.724	0.044
	POEs	0.449	0.034
2007	Central SOEs	4.075	0.121
	Local SOEs	1.034	0.049
	POEs	0.591	0.033

Average	Central SOEs	2.899	0.118
	Local SOEs	0.746	0.044
	POEs	0.471	0.032

R&D intensity is the ratio of R&D expenditures to total sales; innovation performance is the ratio of new product sales over total sales

TABLE 2
STATE OWNERSHIP CONCENTRATION, R&D INTENSITY AND INNOVATION PERFORMANCE BY INDUSTRY

Two-digit industry	**State Stock**	**R&D intensity**	**Innovation performance**
13. Food Processing	0.051	0.345	0.018
14. Food Production	0.049	0.415	0.051
15. Beverage Production	0.074	0.344	0.034
16. Tobacco Processing	0.520	1.781	0.029
17. Textile	0.016	0.210	0.026
18. Garments and Other Fibre Products	0.011	0.074	0.032
19. Leather, Furs, Down, and Related Products	0.005	0.095	0.036
20. Timber Processing	0.022	0.070	0.021
21. Furniture Manufacturing	0.012	0.138	0.032
22. Papermaking and Paper Products	0.024	0.146	0.016
23. Printing and Record Medium Reproduction	0.139	0.266	0.024
24. Cultural, Educational, and Sports Goods	0.012	0.140	0.038
25. Petroleum Refining and Coking	0.048	0.769	0.017
26. Raw Chemical Materials and Chemical Products	0.041	1.002	0.038
27. Medical and Pharmaceutical Products	0.055	2.833	0.097
28. Chemical Fibre	0.023	0.645	0.039
29. Rubber Products	0.026	0.410	0.032
30. Plastic Products	0.016	0.242	0.028
31. Non-metal Mineral Products	0.044	0.269	0.030

32. Smelting and Pressing of Ferrous Metals	0.029	0.255	0.021
33. Smelting and Pressing of Non-ferrous Metals	0.038	0.858	0.034
34. Metal Products	0.020	0.323	0.026
35. Ordinary Machinery	0.034	0.629	0.043
36. Special Purposes Equipment	0.056	1.808	0.072
37. Transport Equipment	0.063	1.145	0.056
39. Electric Equipment and Machinery	0.026	1.280	0.060
40. Telecommunications, Computer and other Electronics	0.031	4.378	0.107
41. Instruments and Meters	0.051	4.089	0.116
42. Arts and Grafts Products	0.018	0.379	0.039
43. Waste Resources and Materials Recycling, Processing	0.015	0.251	0.014
Average across Manufacturing	0.035	0.768	0.040

The numbers in the first column are two-digit industry codes used by the National Bureau of Statistics of China

TABLE 3
DEFINITION OF VARIABLES

	Definition
Dependent variables	
R&D intensity	Ratio of R&D expenditure to total sales
Innovation performance	Ratio of new product sales to total sales
Independent variables	
State stock concentration	Ratio of state-owned assets to total assets if a firm is state-owned
Private stock concentration	Ratio of private-owned assets to total assets if a firm is private-owned
Central SOEs	Dummy, equals to 1 if state-owned and affiliated at the state level of government
Local SOEs	Dummy, equals to 1 if state-owned and affiliated at the local level of government
POEs	Dummy, equals to 1 if private-owned

Control variables	
Firm size	Number of employees in logarithm
Firm age	Number of years since establishment
Foreign ownership	Dummy, equals to 1 if foreign-owned
Leverage	Ratio of total debts to total assets
Employee training	Ratio of expenditure on employee training to total sales
Capital intensity	Ratio of total fixed assets to total employees
Return to assets	Ratio of total profits to total assets in a lagged period
Industry dummy	Dummy, equals to 1 if affiliated at the corresponding two-digit industry
Region dummy	Dummy, equals to 1 if located at the corresponding province-level region
Year dummy	Dummy, equals to 1 if associated with the corresponding year

TABLE 4
DESCRIPTIVE STATISTICS AND CORRELATION MATRIX OF EXPLANATORY VARIABLES

	Mean	Min	Max	Standard deviation	Correlation matrix										
					1	2	3	4	5	6	7	8	9	10	11
1 R&D intensity	0.01	0	0.99	0.01	1.00										
2 Innovation performance	0.03	0	1	0.14	0.19	1.00									
3 State stock concentration	0.03	0	1	0.17	0.03	0.03	1.00								
4 Private stock concentration	0.50	0	1	0.50	−0.04	−0.05	−0.20	1.00							
5 Central SOEs	0.01	0	1	0.08	0.05	0.04	0.25	−0.08	1.00						
6 Local SOEs	0.03	0	1	0.16	0.02	0.01	0.68	−0.16	−0.01	1.00					
7 POEs	0.51	0	1	0.50	−0.04	−0.05	−0.19	0.99	−0.08	−0.16	1.00				
8 Firm size	4.66	0	11.82	1.08	0.04	0.09	0.07	−0.24	0.07	0.03	−0.24	1.00			
9 Firm age	8.45	1	407	9.02	0.04	0.05	0.32	−0.20	0.18	0.33	−0.20	0.20	1.00		
10 Foreign ownership	0.22	0	1	0.41	0.00	0.01	−0.07	−0.53	−0.04	−0.09	−0.54	0.21	−0.07	1.00	
11 Leverage	0.57	0.01	270.49	0.45	−0.01	0.00	0.07	0.00	0.02	0.07	0.00	0.03	0.07	−0.06	1.
12 Employee training	0.01	0	4.06	0.01	0.04	0.01	0.04	−0.01	0.02	0.04	−0.01	0.01	0.03	−0.01	0.

13 Capital intensity	96.33	0	206520	373.12	0.02	0.01	0.03	−0.05	0.01	0.02	−0.05	−0.04	−0.01	0.05	−0
14 Return to assets	0.10	−23.41	33.99	0.27	−0.02	−0.02	−0.06	0.09	−0.03	−0.06	0.09	−0.04	−0.06	−0.06	−1

All the correlation coefficients are statistically different from zero at the 1% significance level

TABLE 5
HIERARCHICAL ANALYSES OF OWNERSHIP AND R&D INTENSITY: TOBIT ESTIMATION

	R&D expenditure/Sales		
	Benchmark	**Model 1**	**Model 2**
Independent variables			
State stock concentration		0.008***	
		(0.001)	
Private stock concentration		−0.006***	
		(0.000)	
Central SOEs			0.022***
			(0.001)
Local SOEs			0.002**
			(0.001)
POEs			−0.006***
			(0.000)
Control variables			
Firm size	0.014***	0.013***	0.013***
	(0.000)	(0.000)	(0.000)
Firm age	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)
Foreign ownership	−0.005***	−0.009***	−0.009***
	(0.000)	(0.000)	(0.000)
Leverage	−0.013***	−0.013***	−0.013***
	(0.000)	(0.000)	(0.000)
Employee training	0.348***	0.340***	0.338***
	(0.002)	(0.002)	(0.002)
Capital intensity	0.000***	0.000***	0.000***

	(0.000)	(0.000)	(0.000)
Return to assets	−0.002***	−0.001**	−0.001**
	(0.001)	(0.000)	(0.000)
Industry dummy	Yes	Yes	Yes
Region dummy	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes
N	465587	465587	465587
χ2-statistic	41250***	41796***	41984***
Log likelihood	174.53	447.59	541.42

** and *** are significantly different from zero at the 5% and 1% level respectively

TABLE 6
HIERARCHICAL ANALYSES OF OWNERSHIP AND INNOVATION PERFORMANCE: TOBIT ESTIMATION

	New product sales/Sales				
	Benchmark	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Independent variables					
State stock concentration		0.039***	0.028***		
		(0.011)	(0.011)		
Private stock concentration		−0.091***	−0.081***		
		(0.005)	(0.005)		
Central SOEs				0.103***	0.062***
				(0.019)	(0.019)
Local SOEs				−0.019*	−0.022**
				(0.012)	(0.012)
POEs				−0.093***	−0.082***

				(0.005)	(0.005)
Control variables					
R&D intensity			5.410***		5.405***
			(0.091)		(0.091)
Firm size	0.168***	0.163***	0.155***	0.163***	0.155***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Firm age	0.004***	0.003***	0.003***	0.003***	0.003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Foreign ownership	−0.018***	−0.072***	−0.059***	−0.074***	−0.061***
	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)
Leverage	−0.006**	−0.007***	−0.003	−0.006**	−0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Employee training	0.245	0.150	−0.229	0.154	−0.221
	(0.294)	(0.302)	(0.572)	(0.304)	(0.567)
Capital intensity	0.000***	0.000***	0.000***	0.000***	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Return to assets	0.023***	0.034***	0.031***	0.033***	0.030***
	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)
Industry dummy	Yes	Yes	Yes	Yes	Yes
Region dummy	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes
N	465587	465587	459698	465587	459698
χ2-statistic	42120***	42524***	44779***	42539***	44783***
Log likelihood	−123125	−122923	−116502	−122916	−116500

*, ** and *** are significantly different from zero at the 10%, 5% and 1% level respectively

TABLE 7
HIERARCHICAL ANALYSES OF OWNERSHIP AND R&D INTENSITY: IV GMM ESTIMATION

	R&D expenditure/Sales	
	Model 1	**Model 2**
Independent variables		
State stock concentration	0.003***	
	(0.001)	
Private stock concentration	−0.001***	
	(0.001)	
Central SOEs		0.013***
		(0.002)
Local SOEs		0.001**
		(0.000)
POEs		−0.001***
		(0.000)
Control variables		
Capital stock	0.001***	0.001***
	(0.000)	(0.000)
Foreign ownership	−0.001***	−0.001***
	(0.000)	(0.000)
Leverage	−0.001***	−0.001***
	(0.000)	(0.000)
Employee training	0.335***	0.265**
	(0.105)	(0.106)
Capital intensity	−0.000	−0.000

	(0.000)	(0.000)
Return to assets	0.001***	0.001***
	(0.000)	(0.000)
Industry dummy	Yes	Yes
Region dummy	Yes	Yes
Year dummy	Yes	Yes
N	465003	465003
Endogeneity test	6.57***	53.08***
Instrument redundancy test	4647.96***	1232.48***

** and *** are significantly different from zero at the 5% and 1% level respectively

TABLE 8
HIERARCHICAL ANALYSES OF OWNERSHIP AND INNOVATION PERFORMANCE: IV GMM ESTIMATION

	New product sales/Sales			
	Model 1	**Model 2**	**Model 3**	**Model 4**
Independent variables				
State stock concentration	0.053***	0.057***		
	(0.006)	(0.006)		
Private stock concentration	−0.006***	−0.004***		
	(0.001)	(0.001)		
Central SOEs			0.260***	0.265***
			(0.021)	(0.021)
Local SOEs			0.006***	0.007***
			(0.002)	(0.002)
POEs			−0.006***	−0.005***
			(0.001)	(0.001)
Control variables				

R&D intensity		1.706***		1.645***
		(0.078)		(0.077)
Capital stock	0.010***	0.009***	0.009***	0.009***
	(0.000)	(0.000)	(0.000)	(0.000)
Foreign ownership	−0.007***	−0.005***	−0.007***	−0.004***
	(0.001)	(0.001)	(0.001)	(0.001)
Leverage	−0.002**	−0.002***	−0.003***	−0.002***
	(0.001)	(0.001)	(0.001)	(0.001)
Employee training	−0.001	−0.138*	−0.046	−0.296***
	(0.033)	(0.071)	(0.045)	(0.081)
Capital intensity	−0.000***	−0.000***	−0.000***	−0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Return to assets	0.007***	0.006***	0.006***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)
Industry dummy	Yes	Yes	Yes	Yes
Region dummy	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes
N	465003	459147	465003	459147
Endogeneity test	57.57***	69.89***	128.43***	145.89***
Instrument redundancy test	4647.96***	4518.90***	1233.19***	1205.64***

** and *** are significantly different from zero at the 5% and 1% level respectively

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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

Un gran número de estudios en la literatura de gestión han vinculado la propiedad con la investigación y el desarrollo de las empresas (I+D) (Molas-Gallart y Tang 2006; 2011) y argumentó que los tipos de propiedad son cruciales para comprender la intensidad de la I+D y el desempeño de la innovación en las economías avanzadas industrializadas y de transición (Jefferson et al. 2003; Lee y O'Neill 2003; 2014). Por ejemplo, Hoskisson et al. (2002) sugirieron que los fondos públicos de pensiones tienen un punto de vista a largo plazo a la hora de tomar decisiones de inversión, como la I+D y el desarrollo de nuevos productos. (2011) estudió 548 empresas cotizadas en China y encontró que la propiedad extranjera, estatal e institucional influye positivamente en el desempeño de la innovación en las empresas, medida por el volumen del registro de patentes.

A pesar de los grandes avances en la evaluación de la relación, la literatura existente estudió la asociación de la propiedad de una empresa con sus actividades de I+D en un contexto estático sin tener en cuenta el entorno institucional. Muchos estudiosos observaron el cambiante entorno institucional en China después de la reforma económica en 1978. Por ejemplo, los investigadores discutieron los efectos de las reformas económicas en la propiedad corporativa, el gobierno corporativo y el rendimiento de las empresas (Qian 1996; Qi et al. 2000; 2002; Sol y Tong 2003; Zhang 2015). Sin embargo, un número limitado de investigadores estudió los efectos del cambiante entorno institucional en las empresas estatales y la actividad de I+D de otras empresas nacionales. Incluso menos estudios discutieron la divergencia de las pymes tras la reforma económica en relación con su intensidad de I+D y sus resultados en materia de innovación.

Los estudios existentes generalmente consideran la propiedad estatal como un grupo universal (Teng 2012) y encontraron resultados mixtos e incluso contradictorios de los efectos de la propiedad estatal en las actividades de I+D de la empresa. Por ejemplo, Jefferson y otros (2003) encontraron que los gerentes de las empresas de propiedad estatal chinas son más reacios al riesgo en comparación con los gerentes de las empresas privadas o colectivas en entornos complejos y sugirieron que las empresas de propiedad estatal en su conjunto tienen menos probabilidades de seleccionar una estrategia de I+D riesgosa (Zhang et al. 2003). Por otro lado, Chang y otros (2006) sugirieron que la propiedad estatal ofrece a las empresas con objetivos corporativos a largo plazo más allá de la maximización de los beneficios a corto plazo, a su vez, tiene un efecto positivo en la innovación de las empresas. Al abordar esas opiniones contradictorias, extendemos el argumento más allá de la superficie de la propiedad estatal e investigamos cómo los diferentes niveles de propiedad gubernamental influyen en la I+D de una empresa.

Este estudio aborda estas dos lagunas de investigación y hace dos contribuciones. En primer lugar, aprovechamos la teoría institucional con la teoría de la agencia para explicar la intensidad de I+D de la empresa y el rendimiento de la innovación. Un gran número de investigadores han vinculado la propiedad de una empresa con su I+D bajo el marco de la teoría de la agencia. Sin embargo, se pasa por alto el entorno institucional en el que está integrada la empresa. Estudios recientes han reconocido la importancia de las instituciones y han sugerido que las instituciones formales e informales tienen capacidades para facilitar y restringir el comportamiento de las empresas (Peng et al. 2008). Además, las instituciones experimentan cambios a lo largo del tiempo, tanto incrementales como revolucionarios. Por lo tanto, es importante estudiar las instituciones en las economías de transición, no sólo porque las instituciones son diferentes de las economías desarrolladas, sino que también las instituciones están experimentando enormes cambios durante el período de transición.

En segundo lugar, este documento hace contribuciones significativas al demostrar cómo los diferentes niveles de gobierno influyen en la intensidad de I+D de una empresa y el desempeño de la innovación bajo un trasfondo institucional de transición. Estudios anteriores han observado que el gobierno chino participa

en diversas actividades a nivel de empresa (Luo et al. 2010; 2015); sin embargo, investigaciones previas han considerado la propiedad del gobierno como un todo y descuidan las variaciones de los diferentes niveles gubernamentales (Wang et al. 2012b). Sostenemos que esta corriente de investigación sub-teoriza la participación del gobierno y ofrece un entendimiento limitado sobre los efectos diferenciales que varios niveles de gobierno tienen en las actividades de I+D de una empresa. Adoptamos la opinión basada en las instituciones (Peng 2003; 2008) y sugerir que los cambios institucionales de China (es decir, la reforma fiscal y la reforma de las empresas de propiedad estatal) reequilibron las dotaciones de recursos entre los gobiernos central y local, lo que a su vez generó una intensidad de I+D y un rendimiento de innovación entre las empresas propiedad de gobiernos centrales y locales. Proporcionamos no sólo pruebas convincentes que muestran que la organización estatal puede realizar inversiones riesgosas en I+D, sino también notables diferencias en el plazo de intensidad de I+D y el desempeño de la innovación entre las empresas propiedad del gobierno central y las empresas de propiedad estatal local. Por lo tanto, esta investigación proporciona evidencia de la diversidad de la propiedad del gobierno y, en consecuencia, implica diferentes predicciones para el rendimiento de la innovación y el comportamiento de I+D de los propietarios estatales de la literatura pasada.

CONCLUSIÓN

Implicaciones

Nuestros hallazgos alertan en primer lugar a los gestores, inversores y responsables políticos para que tomen en cuenta la importancia del entorno institucional cambiante en las actividades de I+D de las empresas. Las reformas institucionales de China produjeron diferentes niveles de propietarios estatales con diferentes capacidades para tener acceso a los recursos. Estos patrones institucionalizados de asignación de recursos pueden ayudar a las organizaciones a generar nuevas innovaciones o pueden producir miopía y rigidez de inversión. La continuidad en la asignación de recursos atrae la I+D porque esa inversión es de largo horizonte y apenas recibe beneficios en el período intermedio. Siendo el accionista de gran bloque, el gobierno central tiene la obligación de ofrecer rendimientos actuales estables y también realizar inversiones a largo plazo para garantizar la rentabilidad futura. Aunque la naturaleza de los accionistas del bloque recurre al activismo para maximizar el valor a largo plazo, el gobierno local tiene que adaptarse a su falta de disponibilidad de capital y participar en inversiones a corto plazo. Nuestros resultados reflejan estudios anteriores que sugieren que el gobierno central fomenta inversiones a largo plazo, mientras que el gobierno local está asociado con ganancias financieras a corto plazo (Teng 2012).

Además, el reconocimiento de la creciente importancia del gobierno en las inversiones en I+D ha reabierto el debate sobre si la propiedad estatal daña el desempeño de las empresas. Los estudios convencionales han sugerido el impacto negativo de la propiedad estatal en el desempeño de las empresas, y han predicho que el gobierno chino debería seguir diluyendo su proporción de propiedad para mejorar aún más el rendimiento. Sin embargo, nuestros resultados mostraron que la propiedad estatal no es un requisito previo para estas empresas con un bajo rendimiento. Más bien, la propiedad del gobierno central sería muy beneficiosa para las empresas a largo plazo. En cambio, los funcionarios y administradores de los gobiernos locales en esta categoría de propiedad, que se evalúan sobre la base de medidas anuales de rendimiento, a menudo no pueden tener opiniones largas en su decisión de inversión.

Limitaciones de unand direcciones de investigación futuras

Este estudio sugiere una serie de oportunidades para futuras investigaciones. Una vía de investigación sería centrarse en los impactos de los tipos de propiedad en la eficacia de la innovación, tal vez examinando la vinculación entre el gobierno corporativo y la eficiencia de I+D, es decir, sobre la base de la fórmula de entrada y salida. En segundo lugar, una mayor investigación puede desarrollar medidas alternativas de rendimiento de la innovación. Por lo general, estudios anteriores midieron los resultados de innovación de las empresas utilizando el número de patentes. Sin embargo, Choi et al. (2011) indican que no todas las empresas protegen sus activos tecnológicos y sus productos de innovación con patentes. En este estudio, medimos el rendimiento de la innovación utilizando las ventas de nuevos productos sobre las ventas totales. Sin embargo, un nuevo producto puede no ser el resultado de la propia innovación de la empresa. Algunas

empresas pueden adquirir conocimientos técnicos como alternativa para la investigación y el desarrollo internos. En tercer lugar, aunque nos concentramos en las empresas de China, nuestras conclusiones sobre el patrón de disponibilidad de recursos y la innovación firme podrían aplicarse a las empresas emergentes de otras economías de transición. Por lo tanto, este estudio contribuye a la discusión pertinente sobre el aprovechamiento de los recursos organizativos para mejorar el rendimiento a través de la adaptación y promulgación de estrategias en entornos competitivos. Los futuros investigadores deben explorar la generalización de nuestros hallazgos mediante la realización de estudios en otras naciones emergentes y de transición. Los estudios futuros también pueden aprovechar nuestros hallazgos para proporcionar explicaciones completas del comportamiento de los patrones y el dinamismo temporal en la generación y despliegue de recursos flojos para alcanzar los objetivos de la organización. Por último, nuestra muestra solo abarca 2005–2007. La política gubernamental y el entorno industrial pueden tener cambios drásticos después de nuestro período de examen. El gobierno chino está madurando sus instituciones formales. Por ejemplo, China ha realizado amplios progresos en la adhesión a las convecciones internacionales de derechos de propiedad intelectual; la aprobación de las leyes nacionales de derechos de propiedad intelectual, el establecimiento del registro y la observancia. Todos estos cambios institucionales pueden alterar el incentivo para que las empresas de propiedad privada realicen inversiones en I+D. Nuestras conclusiones sobre el papel alentador de las empresas de empresas de empresas de empresas de servicios de empresas de investigación y servicios de investigación también podrían tener cambios después de 2007. Los resultados deben interpretarse en contextos institucionales específicos y otros estudios podrían ampliar nuestros análisis a lo largo de esta línea de investigación.

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

Un grand nombre d'études dans la littérature sur la gestion ont établi un lien entre la propriété et la recherche et le développement des entreprises (R-D) (Molas-Gallart et Tang, 2006; Choi et coll. 2011) et les types de propriété soutenus sont essentiels pour comprendre l'intensité de la R-D et la performance en matière d'innovation dans les économies industrialisées et transitoires avancées (Jefferson et al., 2003; Lee et O'Neill, 2003; Chen et coll. 2014). Par exemple, Hoskisson et coll. (2002) ont laissé entendre que les caisses de retraite publiques ont un point de vue à long terme lorsqu'elles prennent des décisions d'investissement, comme la R-D et le développement de nouveaux produits. Choi et coll. (2011) ont étudié 548 entreprises cotées en Chine et ont constaté que la propriété étrangère, état et institutionnelle in influence positivement la performance de l'innovation des entreprises, mesurée par le volume de l'enregistrement des brevets.

Malgré de grands progrès dans l'évaluation de la relation, la littérature existante a étudié l'association de la propriété d'une entreprise avec ses activités de R-D dans un contexte statique sans tenir compte de l'environnement institutionnel. De nombreux chercheurs ont observé l'évolution de l'environnement institutionnel en Chine après la réforme économique de 1978. Par exemple, les chercheurs ont discuté des effets des réformes économiques sur la propriété des entreprises, la gouvernance d'entreprise et le rendement des entreprises (Qian, 1996; Qi et coll. 2000; Sun et coll. 2002; Sun et Tong, 2003; Zhang 2015).

Toutefois, un nombre limité de chercheurs ont étudié les effets de l'évolution de l'environnement institutionnel sur les entreprises d'État et l'activité de R-D d'autres entreprises nationales. Encore moins d'études ont discuté de la divergence entre les entreprises d'État à la suite de la réforme économique concernant leur intensité en R-D et leur performance en matière d'innovation.

Les études existantes considèrent généralement la propriété publique comme un groupe universel (Teng 2012) et ont révélé des résultats mitigés, voire contradictoires, des effets de la propriété publique sur les activités de R-D de l'entreprise. Par exemple, Jefferson et coll. (2003) ont constaté que les gestionnaires chinois des entreprises d'État sont plus réticents au risque que les gestionnaires d'entreprises privées ou collectives dans des environnements complexes et ont suggéré que les entreprises d'État dans leur ensemble sont moins susceptibles de choisir une stratégie de R-D risquée (Zhang et coll., 2003). D'autre part, Chang et coll. (2006) ont laissé entendre que la propriété gouvernementale offre aux entreprises dont l'objectif à long terme est d'aller au-delà de la maximisation des bénéfices à court terme, ce qui a un effet positif sur l'innovation des entreprises. En abordant ces points de vue contradictoires, nous étendons l'argument au-delà de la surface de la propriété gouvernementale et étudions comment différents niveaux de propriété gouvernementale influencent la R-D d'une entreprise.

Cette étude répond à ces deux lacunes en matière de recherche et apporte deux contributions. Tout d'abord, nous tirons parti de la théorie institutionnelle avec la théorie des agences pour expliquer l'intensité de la R-D et la performance de l'entreprise en matière d'innovation. Un grand nombre de chercheurs ont établi un lien entre la propriété d'une entreprise et sa R-D dans le cadre de la théorie des agences. Toutefois, l'environnement institutionnel dans lequel l'entreprise est intégrée est négligé. Des études récentes ont reconnu l'importance des institutions et ont suggéré que les institutions formelles et informelles ont les capacités de faciliter et de limiter le comportement des entreprises (Peng et coll., 2008). En outre, les institutions subissent des changements au fil du temps, à la fois progressifs et révolutionnaires. Il est donc important d'étudier les institutions des économies en transition, non seulement parce que les institutions sont différentes des économies développées, mais aussi parce que les institutions connaissent d'énormes changements pendant la période de transition.

Deuxièmement, ce document apporte d'importantes contributions en démontrant comment différents ordres de gouvernement influencent l'intensité de la R-D et le rendement d'une entreprise en matière d'innovation dans un contexte institutionnel transitoire. Des études antérieures ont noté que le gouvernement chinois participe à diverses activités au niveau des entreprises (Luo et coll., 2010; Kafouros et coll. 2015); toutefois, des recherches antérieures ont examiné la propriété du gouvernement dans son ensemble et négligent les variations des différents ordres de gouvernement (Wang et coll., 2012b). Nous soutenons que ce volet de recherche sous-théoricien la participation du gouvernement et offre une compréhension limitée des effets différentiels que les divers ordres de gouvernement ont sur les activités de R-D d'une entreprise. Nous adoptons le point de vue fondé sur l'institution (Peng, 2003; Peng et coll. 2008) et suggèrent que les changements institutionnels de la Chine (c.-à-d. La réforme fiscale et la réforme des entreprises d'État) ont rééquilibré les dotations en ressources entre les gouvernements centraux et locaux, ce qui a généré diverses performances en matière de R-D et d'innovation entre les entreprises détenues par des gouvernements centraux et locaux. Nous fournissons non seulement des preuves convaincantes montrant que l'organisation d'État peut entreprendre des investissements risqués en R-D, mais aussi des différences frappantes en termes d'intensité de la R-D et de performance en matière d'innovation entre les entreprises appartenant au gouvernement central et les entreprises appartenant aux gouvernements locaux. Cette recherche fournit ainsi des preuves de la diversité de la propriété du gouvernement et implique par conséquent des prédictions différentes pour la performance de l'innovation et le comportement de R&D des propriétaires d'État de la littérature passée.

CONCLUSION

Implications

Nos résultats alertent tout d'abord les gestionnaires, les investisseurs et les décideurs politiques à prendre en compte l'importance de l'évolution de l'environnement institutionnel sur les activités de R&D

de l'entreprise. Les réformes institutionnelles de la Chine ont produit différents niveaux de propriétaires d'État ayant des capacités différentes pour accéder aux ressources. Ces modèles institutionnalisés d'allocation des ressources peuvent soit aider les organisations à générer de nouvelles innovations, soit produire de la myopie et de la rigidité des investissements. La continuité de l'allocation des ressources attire la R-D parce qu'un tel investissement est à long terme et qu'il ne reçoit guère de retombées au cours de la période intermédiaire. En tant qu'actionnaire majoritaire, le gouvernement central a l'obligation d'offrir des rendements courants stables et de faire des investissements à long terme pour assurer sa rentabilité future. Bien que la nature des actionnaires de bloc recourt à l'activisme pour maximiser la valeur à long terme, le gouvernement local doit s'adapter à leur manque de disponibilité du capital et s'engager dans des investissements à court terme. Nos résultats reflètent des études antérieures qui suggèrent que le gouvernement central favorise les investissements à long terme tandis que le gouvernement local est associé à des gains financiers à court terme (Teng 2012).

En outre, la reconnaissance de l'importance croissante du gouvernement dans les investissements en R-D a rouvert le débat sur la question de savoir si la propriété de l'État nuit au rendement de l'entreprise. Des études conventionnelles ont suggéré l'impact négatif de la propriété de l'État sur le rendement de l'entreprise, et ont prédit que le gouvernement chinois devrait continuer à diluer sa proportion de propriété afin d'améliorer davantage les performances. Cependant, nos résultats ont montré que la propriété de l'État n'est pas une condition préalable à ces entreprises sous-performantes. Au contraire, la propriété du gouvernement central serait très bénéfique pour les entreprises à long terme. En revanche, les fonctionnaires et les gestionnaires des administrations locales de cette catégorie de propriété, qui sont évalués sur la base de mesures annuelles du rendement, ne peuvent souvent pas avoir une longue opinion dans leur décision d'investissement.

Limitations and Future Research Directions

Cette étude suggère un certain nombre de possibilités de recherche future. L'une des possibilités de recherche serait de mettre l'accent sur les répercussions des types de propriété sur l'efficacité de l'innovation, peut-être en examinant le lien entre la gouvernance d'entreprise et l'efficacité de la R-D, c'est-à-dire en fonction de la formule de production des intrants. Deuxièmement, d'autres recherches peuvent mettre au point d'autres mesures de la performance en matière d'innovation. Les études antérieures mesuraient habituellement le rendement des entreprises en matière d'innovation en utilisant le nombre de brevets. Toutefois, Choi et coll. (2011) indiquent que toutes les entreprises ne protègent pas leurs actifs technologiques et leurs produits d'innovation par des brevets. Dans cette étude, nous avons mesuré la performance de l'innovation en utilisant les ventes de nouveaux produits par rapport aux ventes totales. Néanmoins, le nouveau produit peut ne pas être le résultat de la propre innovation de l'entreprise. Certaines entreprises peuvent acheter un savoir-faire technique comme solution de rechange à la recherche et au développement internes. Troisièmement, bien que nous nous concentrions sur les entreprises en Chine, nos constatations sur le modèle de disponibilité des ressources et d'innovation ferme pourraient s'appliquer aux entreprises émergentes dans d'autres économies en transition. Ainsi, cette étude contribue à une discussion pertinente sur l'exploitation des ressources organisationnelles pour améliorer le rendement par l'adaptation et l'adoption de stratégies dans des environnements concurrentiels. Les futurs chercheurs doivent explorer la généralité de nos résultats en menant des études dans d'autres pays émergents et en transition. Les études futures peuvent également tirer parti de nos résultats pour fournir des explications comportementales complètes des modèles et du dynamisme temporel de la génération et du déploiement de ressources mous pour atteindre les objectifs organisationnels. Enfin, notre échantillon ne couvre que 2005-2007. La politique gouvernementale et l'environnement industriel peuvent avoir des changements radicaux après notre période d'examen. Le gouvernement chinois est en train de mûrir ses institutions formelles. Par exemple, la Chine a fait d'importants progrès dans l'adhésion aux convections internationales en matière de DPI; l'adoption de lois nationales sur les DPI, établissant l'enregistrement et l'application. Tous ces changements institutionnels peuvent modifier l'incitation des entreprises privées à investir dans la R-D. Nos conclusions sur le rôle encourageant des entreprises d'État centrales en R-D pourraient également avoir des changements après 2007. Les résultats devraient être interprétés dans des contextes institutionnels spécifiques et d'autres études pourraient étendre nos analyses dans ce domaine de recherche.

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

Eine große Anzahl von Studien in der Managementliteratur hat das Eigentum mit der Forschung und Entwicklung (fue) der Unternehmen in Verbindung gebracht (Molas-Gallart und Tang 2006; Choi et al. 2011) und argumentierte Eigentumsarten sind entscheidend für das Verständnis von F&E-Intensität und Innovationsleistung sowohl in den hochentwickelten Industrie- als auch in der Übergangswirtschaft (Jefferson et al. 2003; Lee und O'Neill 2003; Chen et al. 2014). So schlugen Hoskisson et al. (2002) vor, dass öffentliche Pensionsfonds bei Investitionsentscheidungen wie F&E und produktneuer Entwicklung einen langfristigen Standpunkt haben. Choi et al. (2011) untersuchten 548 börsennotierte Firmen in China und fanden heraus, dass ausländisches, staatliches und institutionelles Eigentum die Innovationsleistung von Unternehmen positiv beeinflusst, gemessen am Volumen der Patentanmeldung.

Trotz großer Fortschritte bei der Bewertung der Beziehung untersuchte die vorhandene Literatur die Verbindung des Eigentums eines Unternehmens mit seinen F&E-Aktivitäten in einem statischen Kontext, ohne das institutionelle Umfeld zu berücksichtigen. Viele Wissenschaftler beobachteten das sich verändernde institutionelle Umfeld in China nach der Wirtschaftsreform 1978. So diskutierten die Forscher beispielsweise die Auswirkungen wirtschaftlicher Reformen auf das Eigentum an Unternehmen, die Corporate Governance und die Unternehmensleistung (Qian 1996; Qi et al. 2000; Sun et al. 2002; Sun and Tong 2003; Zhang 2015). Eine begrenzte Anzahl von Forschern untersuchte jedoch die Auswirkungen des sich wandelnden institutionellen Umfelds auf staatliche Unternehmen (soes) und die fue-Aktivitäten anderer inländischer Unternehmen. Noch weniger Studien diskutierten die Divergenz der SOE nach der Wirtschaftsreform in Bezug auf ihre fue-Intensität und Innovationsleistung.

Bestehende Studien betrachten das Staatliche Eigentum im Allgemeinen als universelle Gruppe (Teng 2012) und fanden gemischte und sogar widersprüchliche Ergebnisse der Auswirkungen des staatlichen Eigentums auf die F&E-Aktivitäten der Unternehmen. So stellten Jefferson et al. (2003) fest, dass die Manager chinesischer soes im Vergleich zu Managern in privaten oder kollektiven Unternehmen in komplexen Umgebungen risikoscheuer sind, und schlugen vor, dass soes als Ganzes weniger wahrscheinlich eine riskante F&E-Strategie wählen (Zhang et al. 2003). Auf der anderen Seite schlugen Chang et al. (2006) vor, dass staatliches Eigentum Unternehmen mit langfristigem Unternehmensziel über die kurzfristige Gewinnmaximierung hinaus bietet, was sich wiederum positiv auf die Innovation der Unternehmen auswirkt. Indem wir uns mit solchen gegensätzlichen Ansichten auseinandersetzen, erweitern wir das Argument über die Oberfläche des Staatseigentums hinaus und untersuchen, wie unterschiedliche Ebenen des staatlichen Eigentums die F&E eines Unternehmens beeinflussen.

Diese Studie behebt diese beiden Forschungslücken und leistet zwei Beiträge. Erstens nutzen wir die institutionelle Theorie mit der Agenturtheorie, um die F&E-Intensität und Innovationsleistung des Unternehmens zu erklären. Eine große Anzahl von Forschern hat das Eigentum eines Unternehmens mit seiner F&E im Rahmen der Agenturtheorie verknüpft. Das institutionelle Umfeld, in das das Unternehmen eingebettet ist, wird jedoch übersehen. Jüngste Studien haben die Bedeutung von Institutionen anerkannt und vorgeschlagen, dass sowohl formelle als auch informelle Institutionen kapazitäten, um das Verhalten von Unternehmen zu erleichtern und einzuschränken (Peng et al. 2008). Darüber hinaus durchlaufen die Institutionen im Laufe der Zeit Veränderungen, sowohl inkrementell als auch revolutionär. Daher ist es wichtig, Institutionen in Übergangsökonomien zu studieren, nicht nur, weil sich die Institutionen von den entwickelten Volkswirtschaften unterscheiden, sondern auch, weil die Institutionen während der Übergangszeit enorme Veränderungen erleben.

Zweitens leistet dieses Papier einen bedeutenden Beitrag, indem es zeigt, wie unterschiedliche Regierungsebenen die F&E-Intensität und Innovationsleistung eines Unternehmens unter einem vorübergehenden institutionellen Hintergrund beeinflussen. Frühere Studien haben festgestellt, dass die chinesische Regierung an verschiedenen Aktivitäten auf Unternehmensebene beteiligt ist (Luo et al. 2010; Kafouros et al. 2015); frühere Forschungen haben jedoch das Eigentum der Regierung als Ganzes betrachtet und dabei Variationen der verschiedenen Regierungsebenen vernachlässigt (Wang et al. 2012b). Wir argumentieren, dass dieser Forschungsstrom die Regierungsbeteiligung untertheorisiert und ein begrenztes Verständnis für die unterschiedlichen Auswirkungen bietet, die verschiedene Regierungsebenen auf die F&E-Aktivitäten eines Unternehmens haben. Wir übernehmen die auf Institutionen basierende Sicht (Peng 2003; Peng et al. 2008) und schlagen vor, dass Chinas institutionelle Veränderungen (d. H. Steuerreform und SOE-Reform) die Ressourcenausstattung zwischen zentralen und lokalen Regierungen neu ausbalancierten, was wiederum zu verschiedenen F&E-Intensitäts- und Innovationsleistungen zwischen Unternehmen führte, die sich im Besitz von Zentral- und Kommunalregierungen befinden. Wir liefern nicht nur überzeugende Beweise dafür, dass staatliche Unternehmen riskante fue-Investitionen tätigen können, sondern auch auffallende Unterschiede in der Laufzeit von F&E-Intensität und Innovationsleistung zwischen unternehmen der Zentralregierung und lokalen regierungseigenen Unternehmen. Diese Forschung liefert somit Beweise für die Vielfalt der staatlichen Eigentumsverhältnisse und impliziert folglich unterschiedliche Vorhersagen für die Innovationsleistung und das F&E-Verhalten von Staatseigentümern aus der Vergangenheit.

SCHLUSSFOLGERUNG

Auswirkungen

Unsere Ergebnisse warnen zunächst Manager, Investoren und politische Entscheidungsträger, die Bedeutung des sich wandelnden institutionellen Umfelds für die F&E-Aktivitäten des Unternehmens zu berücksichtigen. Chinas institutionelle Reformen führten zu unterschiedlichen Ebenen von Staatseigentümern mit unterschiedlichen Fähigkeiten, Zugang zu Ressourcen zu erhalten. Solche institutionalisierten Ressourcenallokationsmuster können Organisationen entweder helfen, neue Innovationen zu generieren, oder sie können Investitionskurzsichtigkeit und Starrheit erzeugen. Die Kontinuität bei der Ressourcenallokation zieht F&E an, da solche Investitionen ein langer Horizont sind und sich in der Zwischenzeit kaum auszahlen. Als großgewachsener Blockaktionär ist die Zentralregierung verpflichtet, stabile laufende Renditen zu liefern und auch langfristige Investitionen zu tätigen, um die zukünftige Rentabilität zu sichern. Obwohl der Blockaktionär Natur auf Aktivismus zurückgreift, um den langfristigen Wert zu maximieren, muss sich die lokale Regierung auf ihre mangelnde Kapitalverfügbarkeit einstellen und kurzfristige Investitionen tätigen. Unsere Ergebnisse spiegeln frühere Studien wider, die darauf hindeuten, dass die Zentralregierung langfristige Investitionen fördert, während die lokale Regierung mit kurzfristigen finanziellen Gewinnen verbunden ist (Teng 2012).

Darüber hinaus hat die Anerkennung der zunehmenden Bedeutung der Regierung für fue-Investitionen die Debatte darüber neu eröffnet, ob staatliches Eigentum die Unternehmensleistung schadet. Konventionelle Studien haben die negativen Auswirkungen des Staatseigentums auf die

Unternehmensleistung nahegelegt und vorhergesagt, dass die chinesische Regierung ihren Anteil an Eigentum weiter verwässern sollte, um die Leistung weiter zu verbessern. Unsere Ergebnisse zeigten jedoch, dass staatliches Eigentum für diese unterdurchschnittlichen Unternehmen keine Voraussetzung ist. Vielmehr wäre das Eigentum des Zentralstaats langfristig für die Unternehmen von großem Nutzen. Im Gegensatz dazu können lokale Regierungsbeamte und Manager dieser Kategorie von Eigentümern, die auf der Grundlage jährlicher Leistungsmaßstäbe bewertet werden, oft keine langen Ansichten in ihrer Investitionsentscheidung vertreten.

Einschränkungen einnd Zukünftige Forschungsrichtungen

Diese Studie schlägt eine Reihe von Möglichkeiten für zukünftige Forschung vor. Eine Möglichkeit der Forschung wäre, sich auf die Auswirkungen von Eigentumsarten auf die Innovationswirksamkeit zu konzentrieren, vielleicht durch die Untersuchung der Verknüpfung zwischen Corporate Governance und F&E-Effizienz, d. H. Auf der Grundlage von Input-Output-Formeln. Zweitens kann die weitere Forschung alternative Messgrößen für die Innovationsleistung entwickeln. Frühere Studien haben in der Regel die Innovationsleistung von Unternehmen anhand der Anzahl der Patente gemessen. Choi et al. (2011) weisen jedoch darauf hin, dass nicht alle Unternehmen ihre technologischen Vermögenswerte und Innovationsergebnisse mit Patenten schützen. In dieser Studie haben wir die Innovationsleistung anhand neuer Produktverkäufe gegenüber dem Gesamtumsatz gemessen. Dennoch kann es sein, dass neue Produkte nicht das Ergebnis eigener Innovationen sind. Einige Unternehmen können technisches Know-how als alternative Umsetzung zur internen Forschung und Entwicklung erwerben. Drittens: Obwohl wir uns auf Unternehmen in China konzentriert haben, könnten unsere Erkenntnisse über das Muster der Ressourcenverfügbarkeit und der Unternehmensinnovation für aufstrebende Unternehmen in anderen Übergangsländern gelten. Somit trägt diese Studie zu einer sachdienlichen Diskussion über die Nutzung organisatorischer Ressourcen bei, um die Leistung durch die Anpassung und Denkvon von Strategien in Wettbewerbsumgebungen zu verbessern. Zukünftige Forscher müssen die Verallgemeinerung unserer Ergebnisse untersuchen, indem sie Studien in anderen Schwellen- und Übergangsländern durchführen. Zukünftige Studien können unsere Erkenntnisse auch nutzen, um umfassende Verhaltenserklärungen für die Muster und die zeitliche Dynamik bei der Generierung und Bereitstellung von Schwachressourcen zu liefern, um organisatorische Ziele zu erreichen. Schließlich deckt unsere Stichprobe nur den Jahren 2005-2007 ab. Die Regierungspolitik und das industrielle Umfeld können sich nach unserer Prüfungsphase dramatisch verändern. Die chinesische Regierung reift ihre formalen Institutionen an. Beispielsweise hat China bei der Teilnahme an internationalen Vorjahren erhebliche Fortschritte erzielt; Die Verabschiedung innerstaatlicher Rechtsvorschriften über Urheberrechte, die Einführung von Registrierung und Durchsetzung. All diese institutionellen Veränderungen können den Anreiz für private Unternehmen ändern, F&E-Investitionen zu tätigen. Unsere Erkenntnisse über die ermutigende Rolle der zentralen soes in fue könnten sich auch nach 2007 verschieben. Die Ergebnisse sollten in spezifischen institutionellen Kontexten interpretiert werden, und weitere Studien könnten unsere Analysen entlang dieser Forschungslinie erweitern.

TRANSLATED VERSION: PORTUGUESE

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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

Um grande número de estudos na literatura gerencial tem vinculado a propriedade com a pesquisa e desenvolvimento das empresas (P&D) (Molas-Gallart e Tang 2006; Choi et al. 2011) e argumentaram que os tipos de propriedade são cruciais para entender a intensidade de P&D e o desempenho da inovação em economias industrializadas e transitórias avançadas (Jefferson et al. 2003; Lee e O'Neill 2003; Chen et al. 2014). Por exemplo, Hoskisson et al. (2002) sugeriram que os fundos de pensão públicos têm um ponto de vista de longo prazo ao tomar decisões de investimento, como P&D e desenvolvimento de novos produtos. Choi et al. (2011) estudaram 548 empresas listadas na China e encontraram propriedade estrangeira, estatal e institucional influenciam positivamente o desempenho da inovação da empresa, medido pelo volume de registro de patentes.

Apesar dos grandes avanços na avaliação da relação, a literatura existente estudou a associação da propriedade de uma empresa com suas atividades de P&D em um contexto estático sem levar em consideração o ambiente institucional. Muitos estudiosos observaram a mudança do ambiente institucional na China após a reforma econômica em 1978. Por exemplo, pesquisadores discutiram os efeitos das reformas econômicas sobre a propriedade corporativa, governança corporativa e desempenho firme (Qian 1996; Qi et al. 2000; Sun et al. 2002; Sun e Tong 2003; Zhang 2015). No entanto, um número limitado de pesquisadores estudou os efeitos da mudança do ambiente institucional sobre as empresas estatais (soes) e a atividade de P&D de outras empresas nacionais. Ainda menos estudos discutiram a divergência dos soes após a reforma econômica em relação à sua intensidade de P&D e desempenho da inovação.

Estudos existentes geralmente consideram a propriedade do governo como um grupo universal (Teng 2012) e encontraram resultados mistos e até contraditórios dos efeitos da propriedade do governo nas atividades de P&D da empresa. Por exemplo, Jefferson et al. (2003) descobriram que os gerentes chineses de soes são mais avessos ao risco em comparação com gestores em empresas privadas ou coletivas em ambientes complexos e sugeriram que os soes como um todo são menos propensos a selecionar uma estratégia de P&D arriscada (Zhang et al. 2003). Por outro lado, Chang et al. (2006) sugeriram que a propriedade do governo oferece empresas com objetivo corporativo de longo prazo além da maximização dos lucros de curto prazo, por sua vez, tem um efeito positivo na inovação das empresas. Ao abordar tais visões conflitantes, estendemos o argumento para além da superfície da propriedade do governo e investigamos como diferentes níveis de propriedade do governo influenciam o P&D de uma empresa.

Este estudo aborda essas duas lacunas de pesquisa e faz duas contribuições. Primeiro, aproveitamos a teoria institucional com a teoria das agências para explicar a intensidade de P&D da empresa e o desempenho da inovação. Um grande número de pesquisadores vinculou a propriedade de uma empresa com seu P&D sob a estrutura da teoria da agência. No entanto, o ambiente institucional em que a empresa está incorporada é negligenciado. Estudos recentes têm reconhecido a importância das instituições e sugerido que tanto as instituições formais quanto as informais têm capacidades de facilitar e restringir o comportamento firme (Peng et al. 2008). Além disso, as instituições sofrem mudanças ao longo do tempo, tanto incrementais quanto revolucionárias. Assim, é importante estudar as instituições em economias transitórias, não apenas porque as instituições são diferentes das economias desenvolvidas, mas também as instituições estão experimentando grandes mudanças durante o período de transição.

Em segundo lugar, este artigo faz contribuições significativas, demonstrando como diferentes níveis de governo influenciam o desempenho de P&D e inovação de uma empresa sob um fundo institucional transitório. Estudos anteriores observaram que o governo chinês está envolvido em atividades de nível firme variados (Luo et al. 2010; Kafouros et al. 2015); no entanto, pesquisas anteriores consideraram a propriedade do governo como um todo e negligencia variações de diferentes níveis governamentais (Wang et al. 2012b). Argumentamos que esse fluxo de pesquisa sub-teoriza o envolvimento do governo e oferece uma compreensão limitada sobre os efeitos diferenciais que vários níveis de governo têm sobre as atividades de P&D de uma empresa. Adotamos a visão baseada na instituição (Peng 2003; Peng et al. 2008) e sugerem que as mudanças institucionais da China (ou seja, reforma tributária e reforma do SOE) reequilibraram as doações de recursos entre os governos central e local, o que, por sua vez, gerou várias intensidades de P&D e desempenho de inovação entre empresas de propriedade dos governos central e local. Fornecemos não apenas evidências convincentes que mostram que a organização estatal pode realizar investimentos

arriscados em P&D, mas também diferenças marcantes em termos de intensidade de P&D e desempenho de inovação entre empresas estatais centrais e empresas estatais locais. Esta pesquisa fornece, assim, evidências da diversidade de propriedade do governo e, consequentemente, implica diferentes previsões para o desempenho da inovação e o comportamento de P&D dos proprietários de estatais da literatura passada.

CONCLUSÃO

Implicações

Em primeiro lugar, nossos resultados alertam gestores, investidores e formuladores de políticas para levar em conta a importância da mudança do ambiente institucional nas atividades de P&D da empresa. As reformas institucionais da China produziram diferentes níveis de proprietários de Estado com diferentes habilidades para obter acesso aos recursos. Esses padrões institucionalizados de alocação de recursos podem ajudar as organizações a gerar novas inovações ou podem produzir miopia de investimento e rigidez. A continuidade na alocação de recursos atrai P&D porque esse investimento é um horizonte longo e dificilmente recebe pagamentos no período provisório. Sendo o acionista de grandes blocos, o governo central tem a obrigação de entregar retornos correntes estáveis e também fazer investimentos de longo prazo para garantir a rentabilidade futura. Embora a natureza dos acionistas do bloco recorra ao ativismo para maximizar o valor a longo prazo, o governo local tem que se adaptar à sua falta de disponibilidade de capital e se engajar em investimentos de curto prazo. Nossos resultados refletem estudos anteriores que sugerem que o governo central promove investimentos de longo prazo, enquanto o governo local está associado a ganhos financeiros de curto prazo (Teng 2012).

Além disso, o reconhecimento da crescente importância do governo nos investimentos em P&D reabriu o debate sobre se a propriedade estatal prejudica o desempenho firme. Estudos convencionais sugerem o impacto negativo da propriedade estatal no desempenho das empresas, e previram que o governo chinês deve continuar a diluir sua proporção de propriedade, a fim de melhorar ainda mais o desempenho. No entanto, nossos resultados mostraram que a propriedade estatal não é pré-requisito para essas empresas de baixo desempenho. Em vez disso, a propriedade do governo central seria altamente benéfica para as empresas a longo prazo. Em contrapartida, os funcionários e gestores do governo local sob esta categoria de propriedade, que são avaliados com base em medidas anuais de desempenho, muitas vezes não podem ter opiniões longas em sua decisão de investimento.

Limitações and Futuras Direções de Pesquisa

Este estudo sugere uma série de oportunidades para pesquisas futuras. Uma das vias de pesquisa seria focar nos impactos dos tipos de propriedade na eficácia da inovação, talvez olhando para a ligação entre governança corporativa e eficiência de P&D, ou seja, baseada na fórmula de entrada-saída. Em segundo lugar, novas pesquisas podem desenvolver medidas alternativas de desempenho em inovação. Estudos anteriores geralmente mediram o desempenho de inovação das empresas usando o número de patentes. No entanto, Choi et al. (2011) indicam que nem todas as empresas protegem seus ativos tecnológicos e as saídas de inovação com patentes. Neste estudo, medimos o desempenho da inovação utilizando vendas de novos produtos em relação ao total de vendas. No entanto, o novo produto pode não ser o resultado da própria inovação da empresa. Algumas empresas podem adquirir know-how técnico como implemento alternativo à pesquisa e desenvolvimento interno. Em terceiro lugar, embora nos concentremos em empresas na China, nossas descobertas sobre o padrão de disponibilidade de recursos e inovação firme podem se aplicar a empresas emergentes em outras economias transitórias. Assim, este estudo contribui para uma discussão pertinente sobre o aproveitamento de recursos organizacionais para melhorar o desempenho por meio da adaptação e promulgação de estratégias em ambientes competitivos. Os futuros pesquisadores precisam explorar a generalização de nossas descobertas realizando estudos em outras nações emergentes e transitórias. Estudos futuros também podem alavancar nossos achados para fornecer explicações comportamentais abrangentes para os padrões e dinamismo temporal na geração e implantação de recursos frouxos para alcançar objetivos organizacionais. Finalmente, nossa amostra só abrange 2005-2007. A política governamental e o ambiente industrial podem ter mudanças drásticas após o período de exame. O

governo chinês está amadurecendo suas instituições formais. Por exemplo, a China fez grandes progressos na adesão a convecções internacionais de IPR; aprovando leis de IPR domésticas, estabelecendo registro e execução. Todas essas mudanças institucionais podem alterar o incentivo para empresas privadas fazerem investimentos em P&D. Nossas descobertas sobre o papel encorajador dos soes centrais em P&D também podem ter mudanças após 2007. Os resultados devem ser interpretados em contextos institucionais específicos e estudos posteriores poderiam estender nossas análises ao longo dessa linha de pesquisa.