HOW MAY GOVERNMENTS AFFECT THE LOCATION OF NEW BUSINESSES? EVIDENCE FROM CHINA

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Abstract

This paper examines how Chinese local governments influence the location choices of new businesses through various policy measures. As China transitions toward high-quality economic development, local authorities actively implement strategies to attract firms, yet the complexity of these policies and their combined effects remain underexplored. Using data from 266 major Chinese cities, we analyze the impact of demographic, monetary, infrastructural, and environmental factors on firm entry, with a particular focus on government interventions. Our contribution to existing literature lies in assessing both direct and indirect effects of local government policies, revealing that expenditures on research and development, education, and infrastructure significantly enhance a region's attractiveness for businesses. Additionally, we find that firms are more likely to establish themselves in areas with looser environmental regulations, aligning with cost-minimization strategies. The results suggest that policy interventions play a crucial role in shaping business distribution, but their effectiveness varies depending on regional economic conditions. For economically lagging cities, additional government efforts in infrastructure and human capital development are needed to improve competitiveness. Stricter environmental policies may also help balance economic growth with sustainability without necessarily deterring firm entry. Future research should explore long-term policy effects and consider a broader range of industries, particularly small and medium-sized enterprises, to provide a more comprehensive understanding of firm location dynamics.

Keywords: *new business location, firm spatial distribution, China, entrepreneurship*

1. INTRODUCTION

Since the introduction of the reform and opening-up policy, China has consistently pursued the market-based transformation of its economic system. That transformed into a boost for the Chinese economy, with a nearly ten-percent average annual growth since the 1980s, which helped China overtake Japan to become the second-largest economy in the world by 2010. Nevertheless, in recent years, increasing domestic problems, exacerbated by the impact of the Covid pandemic, have significantly slowed down the growth of the Chinese economy. Considering that the market economy reform in China has not yet been completed and that state policy continues to exert a considerable influence on the economy, the problem arises of how to stimulate further entrepreneurial activity.

The report of the 19th Congress of the Communist Party of China in 2017 emphasized that the Chinese economy has shifted from a growth phase to a phase of high-quality development. In this phase, local governments are eager to attract new businesses and promote economic innovation. The establishment of new businesses does not only help to create jobs and increase citizens' income but also introduces new technologies and products, driving the diversification and sustainability of the local economy. Therefore, Chinese local governments are making efforts to attract entrepreneurs and production facilities to their areas through various administrative measures. The Chinese system of economic decentralization gives local governments greater autonomy in their development. At the same time, linking economic development with political advancement increases competition in terms of the attractiveness of different regions. This competition will undoubtedly encourage local governments to adopt more flexible policies that are more favorable to businesses.

Although recent scientific literature has tried to evaluate the impact of Chinese government policies on the location patterns of new companies, the ongoing research lacks a systematic approach. Recent studies on China have focused mainly on individual influencing factors such as government regulatory

measures or environmental policies, thus neglecting multiple direct (e.g., industrial policies, taxes, etc.) and indirect effects (e.g., advancements in infrastructure, presence of a qualified labor force, etc.). Moreover, those effects often play an important role in determining regional attractiveness and the sustainability of the location choice for companies.

Contrary to existing studies, this paper contributes to a better understanding of how Chinese local governments influence the location choice of new businesses. We aim to assess the existing governmental policies, as well as investigate their direct and indirect effects. In addition, this paper also examines the challenges and opportunities that Chinese companies face when choosing where to locate. Our study unfolds as follows. Chapter 2 focuses on the theoretical background. Chapter 3 covers model specifications, explains the selection of variables, and describes data sources. Chapter 4 interprets the empirical results and discusses the effects of policies on the location choices of companies. Chapter 5 summarizes the paper and presents recommendations for future research and policy design.

2. BACKGROUND INFORMATION

2.1. Literature overview

The existing scientific literature mentions multiple factors affecting the attractiveness of particular areas for businesses. First and foremost, the overall economic prosperity of a region or a particular area serves as an important attraction for potential firm founders. Monetary variables, like GDP per capita and net income of households, are usually positively associated with the appearance of new businesses (Parajuli and Haynes, 2017), as richer individuals with more financial freedom seek opportunities for capital gains. Secondly, demographic parameters, like the share of the economically active population (Celbiş, 2021) or the presence of foreigners (Hart and Ács, 2011), are considered favorable for the entrepreneurial environment. While culturally diverse areas may be more attractive thanks to the presence of unique knowledge, the skills themselves, or the presence of a highly qualified workforce are sometimes mentioned as the main factors affecting the decision of entrepreneurs to locate their businesses (Akerman et al., 2015). Lastly, infrastructural parameters contribute to the attractiveness of new businesses, such as the presence of a university (McCoy et al., 2018), broadband availability (Sarachuk), or the density of roads, railroads, and airports (...).

The role of governments in regional economic development, particularly in guiding the location choices of firms, is also highly debated in recent literature. On the one hand, authorities have significant power to manipulate the number of firm entries by implementing either loose or strict measures (Ciccone and Papaioannou, 2007; Klapper et al., 2006). Start-up reforms offering potential founders new opportunities may also boost business activity, as seen in Mexico in the early 2000s (Bruhn, 2011; Kaplan et al., 2011). Furthermore, environmental regulation policies can encourage the creation of certain types of firms, as Becker and Henderson (2000) investigated for county-level environmental regulation on four high-polluting industries in the US. Similarly, Condliffe and Morgan (2009), using county-level data in the US with a Poisson model, showed that in non-compliant areas, the number of new businesses decreased by about 10%.

Several papers document the importance of government investment in infrastructure for productivity growth (Faria et al., 2022). It is well-known that government decisions on public services can change the level of basic technology and thus influence the long-term growth rate of the economy. For example, Mejia-Dorantes et al. (2012) examined the impact of Metro Line 12 in Madrid, Spain, on urban accessibility and the location of businesses. Ghani et al. (2017), using the difference-in-differences method, confirmed that the Indian Golden Quadrilateral (GQ) highway project expanded economic activities toward medium-sized cities. Rothenberg et al. (2013) examined how the improvement of highway quality in Indonesia influenced the location decisions of new manufacturing firms and discussed the variability of firm clustering and distribution between industrial and rural areas.

One more topic concerns the differences between non-state-owned enterprises and state-owned enterprises. In fact, government support policies may promote the transformation and development of small and medium-sized enterprises toward *specialization and innovation*. Among these policy

instruments, supply-side policies addressed the resource challenges faced by SMEs. This effect can be amplified when authorities invest in technological innovation, which enhances efficiency and reduces costs, leading to improved competitiveness (Zhu et al., 2024).

2.2. Existing studies on China

The People's Republic of China, with its peculiarities in the approach to economic governance, represents one of the most interesting cases of the problem of how authorities may influence the appearance of new businesses. Recently, the behavior of local governments was confirmed to be one of the main decisive factors that influence whether companies enter a particular region or not, while the reform of the local government administrative examination system in China has driven the entry rate of new enterprises (Bi et al., 2018).

In this context, the control of China's local government is mainly manifested in land regulation. Land is not only the basic carrier of industrial development but also a decisive factor in spatial constraints, while rising prices impact the structure of the Chinese industry (Xia et al., 2023; Yang et al., 2023). In order to promote the attraction of social capital, local governments adopt different pricing policies for industrial, commercial, and residential land. Lowering prices for industrial areas helps to attract companies to new cities and lays the foundation for the development of industrial clusters.

With respect to the effect of environmental regulations on enterprise location selection, recent studies have failed to confirm a significant effect of environmental regulations on this selection in China (Zhou and Zheng, 2015), contrary to the experience of developed countries. This finding suggests that polluting businesses tend to relocate to areas with looser environmental regulations. Still, along with the progress of industrialization in China and the industrial structural transformation across regions, the pressure on the environment from pollutants generated by industrial production is steadily increasing, leading to stricter environmental regulation (Chen et al., 2019). These measures make industrial enterprises face higher production costs due to the need to control pollution or reduce emissions.

Furthermore, Chinese scholars are also beginning to incorporate environmental regulation factors into their analytical frameworks for enterprise site selection. Currently, gross domestic product (GDP) mainly serves as a performance evaluation system, so the relocation of Chinese industry generally follows a pattern of expanding first within provinces and then outside provinces. Therefore, the study of the impact of local government environmental regulation on enterprise location selection has practical significance.

With respect to human resources, Chinese local governments directly shape the regional labor market by establishing educational institutions, providing scholarships, and promoting policies that encourage cooperation with enterprises. Some scholars argue that education, training, and experience play a crucial role in entrepreneurship and regional economic growth, while others find no significant relationship between government spending on education and economic growth (Cui et al., 2024; Han et al., 2022; Wang and Wu, 2025). As a possible explanation for that, the lack of relevant infrastructure, a low level of development, low administrative efficiency, and incomplete accompanying services are cited as problems that delay the impact of education on economic growth.

3. DATA AND METHODOLOGY

In this study, we tried to evaluate whether some of the governmental measures could possibly influence the location of businesses in China. The main problem faced by the authors in their research is the almost complete absence of open statistical data on enterprises, social, and environmental aspects. The National Bureau of Statistics of the People's Republic of China publishes mainly aggregate data (at the provincial level), while more detailed figures are virtually non-existent. Under these circumstances, the only data that we were able to find at a more detailed level were included in the Statistical Yearbook of Chinese Cities 2022.

From this dataset, we were able to retrieve several indicators for 266 major cities in China. Unfortunately, this dataset does not have detailed data on firm statistics, except for the so-called new

enterprises *above designated size*. These entities represent mainly large companies with an annual revenue from main business operations of 20 million yuan or more ($2.7 mln.). Given that the dataset contains data on both industrial enterprises and wholesale or retail firms of this kind, we decided to analyze them separately. Thus, the number of enterprises above designated size is the dependent variable in our analysis.

Next to the firm variable, we included a set of further explanatory parameters. First of all, demographic parameters are important for the appearance of new firms (Celbiş, 2021), both in terms of demand for goods and services by households and the availability of labor force. Then, monetary variables are considered important for the entrepreneurial milieu. For instance, higher GDP per capita is associated with the wealth of households, and richer households are more prone to spend more money and even open their own businesses (Parajuli and Haynes, 2017). At the same time, state expenditures, for example, on technological improvements in the form of research and development support, may contribute to the growth of new firms (Faria et al., 2022). The same holds true for physical infrastructure, such as the length of roads and highways (Ghani et al., 2017). Also, firm dynamics can be influenced by environmental policies (Chen et al., 2019), so we included the average CO_2 emission rate as a control variable.

Finally, we included several binary control variables. One is the presence of universities in the city — but, as most Chinese metropolises have research units, we decided that this parameter should take the value of 1 only if the city has more than one university. Akerman, Gaarder and Mogstad (2015) reported that not only universities matter, but also skills, so we included a binary variable for expenditures on education and science (which takes a value of 1 if the city spends on average more than $500,000 per teacher or scientist). The last variable represents an interaction between two aforementioned parameters, as regions with more research units and higher expenditures on science are expected to have higher levels of entrepreneurial activity, particularly among technologically driven industrial enterprises. The summary statistics is presented in Table 1.

Code	Description	Mean	St. Dev.	Min	Max
COMP	Number of new enterprises above designated size (Dependent variable, natural log transformed)	6.6064	1.1442	1.9459	9.3843
POPULATION	Population aged 15 to 65 (natural log transformed)	5.8780	.7310	3.5835	8.0737
GDP_CAPITA	GDP per capita (natural log transformed)	10.9541	.4592	9.7659	12.0189
EXPEND_TECH	Expenditures on R&D (natural log transformed)	9.9050	2.0241	3.7612	15.2288
HIGHWAYS	Length of highways in km (natural log transformed)	6.0236	.64555	3.2958	8.1321
CO2_EMISSION	Average percentage of CO_2 emissions	33.8134	11.2980	9	62
UNIVERSITY	Presence of university Binary (1 if at least two universities present)	.8383	.3688	0	1
EXC_ED_EXP	Excessive expenditure on education Binary (1 if more than $500,000 per teacher / scientist)	.3383	.4740	0	1
UNIV x EXCED	Interaction variable between UNIVERSITY and EXC_ED_EXP Binary				

Table 1. Summary statistics

	(1)	(2)	(3)	(4)	(5)
Dependent variable: New enterprises above designated size (annual revenue from main business operations of 20 million yuan or more)					
POPULATION	0.874***	0.799***	0.807***	0.747***	0.778***
	[0.0794]	[0.0831]	[0.0831]	[0.139]	[0.0954]
GDP_CAPITA	0.727***	0.783***	0.795***	0.0599	0.980***
	[0.0991]	[0.101]	[0.101]	[0.200]	[0.115]
EXPEND_TECH	0.111***	0.106***	0.106***	0.145***	0.101***
	[0.0303]	[0.0304]	[0.0305]	[0.0501]	[0.0357]
HIGHWAYS	0.114*	0.142**	0.148**	0.0854	0.224***
	[0.0654]	[0.0666]	[0.0668]	[0.126]	[0.0759]
CO2_EMISSION		0.00942***	0.00973***	-0.00004	0.0131***
		[0.00314]	[0.00315]	[0.00552]	[0.00362]
UNIVERSITY		0.210**			
		[0.1000]			
EXC_ED_EXP		0.216***			
		[0.0751]			
UNIV x EXCED			0.202**	0.211	0.223**
			[0.0797]	[0.139]	[0.0909]
Constant	-8.282***	-9.127***	-9.145***	-0.409	-11.52***
	[1.052]	[1.091]	[1.084]	[1.964]	[1.249]
Sample	FULL	FULL	FULL	Δ GDP < 2%	Δ GDP > 2%
R-squared (Adjusted R-squared)	0.796 (0.793)	0.810 (0.804)	0.806 (0.802)	0.799 (0.774)	0.831 (0.826)
Observations	266	252	252	56	196

Table 2. Regression analysis. Standard errors in parenthesis. *** p < 0.001, ** p < 0.01, * p < 0.1

4. DISCUSSION

Table 2 summarizes the results of our regression analysis. The first three models refer to the general sample, where we included all cities. For some observations, the entries are missing, so not all cities are included in the different settings. Model 4 includes only cities where GDP growth between 2021 and 2022 was below 2%, and Model 5 includes cities with higher GDP growth rates.

First of all, it is clear that population size and government expenditures on research and development are the main factors that seem to be attractive to firms. Indeed, large firms especially look for areas where they can serve large populations, but also where they have better access to the labor market. At the same time, government expenditures on newer technologies are crucial for industrial enterprises, as the basic knowledge created by scientists is subsequently used by firms for their own services and goods. Both variables are positive and significant at the 1% level in all five settings.

Next, physical infrastructure, such as the length of highways, is also significant (at the 5% level), but it obviously plays a higher role in more prosperous areas with higher levels of economic growth. For a country like China, with a large population, logistics can be a huge problem; thus, a better network of high-speed motorways could be an important factor for many companies when choosing a location. The same holds true for our monetary variable (which is positive and significant at the 1% level in all settings, except Model 4), as economically stronger areas usually attract more potential entrants than lagging regions.

Quite interesting is the outcome for the average level of carbon emissions, indicating that areas with higher values are more favorable for large businesses. This aligns with the findings of Zhou and Cheng (2015) and seems quite logical, as larger enterprises aim to reduce their production costs due to obligations related to pollution control. As a result, they may try to locate themselves in cities with lax environmental regulations. As we were unable to get further information on firm dynamics, we cannot derive any further conclusions from this, but it would still be extremely interesting to examine whether the same applies to companies operating in other economic sectors, as well as to small and medium enterprises.

Finally, we confirmed that areas with more than one research institution (Model 2, where the estimate is significant at the 5% level), as well as cities with higher expenditures on education (where the estimate is significant at the 1% level), are more attractive for potential large enterprises entering the region. The same holds true for the interaction variable (significant at the 5% level in Model 3 and Model 5), confirming the common view that not only the presence of research units matters, but also investment in education and, consequently, market-relevant skills and knowledge. Besides, all these factors seem to be significant only for areas with better overall economic performance, while for lagging cities (Model 4), additional government efforts appear to be insignificant.

5. CONCLUSION

This study tried to contribute to the ongoing debate which government policies can influence firm entry patterns. Our findings for China cities indicate that local governments might have a significant capacity to manipulate the number of firm entries through the strictness or flexibility of policies, at least for the large-scale companies. Specifically, our results confirm that factors such as government expenditures on research and development, investments in education, and the presence of research institutions positively impact the attractiveness of a region for business establishments. Additionally, infrastructure quality, including the length of highways, plays a crucial role in firm location decisions, particularly in regions with higher economic growth. Moreover, the analysis suggests that firms tend to locate in areas with more lenient environmental regulations, supporting previous studies that indicate businesses prefer locations where they can minimize operational constraints and costs. These findings contribute to the broader discussion on the role of government intervention in shaping regional economic development and business distribution.

The results underscore the importance of targeted policy measures, particularly for economically lagging regions, to reduce disparities in business formation across China. While prosperous regions already benefit from a combination of strong infrastructure, research institutions, and educational investments, lower-performing areas seem to require additional government attention to enhance their attractiveness to businesses. Policies focused on improving infrastructure, increasing investment in education and workforce development, and fostering technological innovation may help mitigate regional disparities. Furthermore, stricter environmental regulations in high-pollution areas could encourage more sustainable business practices without necessarily deterring firm entry. The nuanced role of governmental support in shaping business dynamics suggests that regional policies must be tailored to address specific economic conditions and developmental needs.

Despite its contributions, this study has several limitations. First, our analysis is constrained by data availability, as it only covers city-level data, limiting the ability to account for intra-city variations. Additionally, the study includes only a limited set of variables, potentially overlooking other influential factors such as industry-specific incentives, or the factors affecting firm productivity. Furthermore, our research is based on data from a single time period, preventing us from capturing the dynamic aspects of policy effects over time. Future research should address these limitations by possibly expanding the dataset to include multiple time periods, incorporating a wider range of economic sectors, and focusing rather on small and medium-sized enterprises to gain a more comprehensive understanding of firm entry patterns. A longitudinal approach would allow for a more detailed analysis of how government policies evolve and their long-term impact on business location decisions.

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REFERENCES

1. Akerman, A., Gaarder, I., Mogstad, M., 2015. The skill complementarity of broadband internet. The Quarterly Journal of Economics 130, 1781–1824.
2. Becker, R., Henderson, V., 2000. Effects of air quality regulations on polluting industries. Journal of political Economy 108, 379–421.
3. Bi, Q., Chen, X., Xu, X., Li, S., 2018. Administrative approval reform and firm entry. Economic Research Journal 2, 140–155.
4. Bruhn, M., 2011. License to sell: the effect of business registration reform on entrepreneurial activity in Mexico. The Review of Economics and Statistics 93, 382–386.
5. Celbiş, M.G., 2021. A machine learning approach to rural entrepreneurship. Papers in Regional Science 100, 1079–1105.
6. Chen, W., Huang, X., Liu, Y., Luan, X., Song, Y., 2019. The impact of high-tech industry agglomeration on green economy efficiency—Evidence from the Yangtze river economic belt. Sustainability 11, 5189.
7. Ciccone, A., Papaioannou, E., 2007. Red tape and delayed entry. Journal of the European Economic Association 5, 444–458.
8. Condliffe, S., Morgan, O.A., 2009. The effects of air quality regulations on the location decisions of pollution-intensive manufacturing plants. Journal of Regulatory Economics 36, 83–93.
9. Cui, L., Shen, J., Mai, Z., Lin, C., Wang, S., 2024. Spatial Distribution and Location Determinants of High-Tech Firms in Shenzhen, a Chinese National Innovative City. Land 13, 1355.
10. Faria, J.R., Prado, M., Ferreira, J.J., 2022. Informality, infrastructure investments, and new firms' creation: The location strategy. Journal of the Knowledge Economy 13, 321–331.

11. Ghani, E., Goswami, A.G., Kerr, W.R., 2017. Highways and spatial location within cities: Evidence from India. The World Bank Economic Review 30, S97–S108.
12. Han, L., Zhou, L., Bao, H., Zeng, X., Taghizadeh-Hesary, F., 2022. What affects China's high-tech industry land misallocation: Government behavior or enterprise behavior? Frontiers in Environmental Science 10, 959926.
13. Hart, D.M., Ács, Z., 2011. High-tech immigrant entrepreneurship in the United States. Economic Development Quarterly 25, 116–129.
14. Kaplan, D.S., Piedra, E., Seira, E., 2011. Entry regulation and business start-ups: Evidence from Mexico. Journal of Public Economics 95, 1501–1515.
15. Klapper, L., Laeven, L., Rajan, R., 2006. Entry regulation as a barrier to entrepreneurship. Journal of financial economics 82, 591–629.
16. McCoy, D., Lyons, S., Morgenroth, E., Palcic, D., Allen, L., 2018. The impact of broadband and other infrastructure on the location of new business establishments. Journal of regional science 58, 509–534.
17. Mejia-Dorantes, L., Paez, A., Vassallo, J.M., 2012. Transportation infrastructure impacts on firm location: The effect of a new metro line in the suburbs of Madrid. Journal of Transport Geography 22, 236–250.
18. Parajuli, J., Haynes, K., 2017. Spatial heterogeneity, broadband, and new firm formation. Quality Innovation Prosperity 21, 165–185.
19. Rothenberg, A.D., 2013. Transport infrastructure and firm location choice in equilibrium: evidence from Indonesia's highways. Unpublished Manuscript, Department of Economics, University of California, Berkeley.
20. Wang, C., Wu, J., 2025. The change of distribution pattern and influencing factors of high-tech enterprises in the Yangtze River Economic Belt. Geographical Research 44, 825–841.
21. Xia, Z., Huiying, W., Fengyu, C., Peng, J., 2023. Study on Spatial Spillover and Threshold Effects of Urban Land Prices on Industrial Structure Upgrading. Modern Management Science 62–71.
22. Yang, J., Wei, R., Huang, Y., 2023. On the Spatial Pattern and Evolution of Industrial Land Supply in China. Journal of Renmin University of China 37, 74–87.
23. Zhou, H., Zheng, Y., 2015. The impact of environmental regulation on industry transfer: Evidence from new manufacturing location. South China Journal of Economics 33, 12–26.
24. Zhu, Y., Wang, L., Shang, W., 2024. Research on the Decision Method of R&D Investment in State Owned Enterprises Considering Multiple Factors, in: SHS Web of Conferences. EDP Sciences, pp. 1–4.