Does Transportation Time Affect Corporate Financialization----Based on the Quasi-natural Experiment on High-Speed Railway Opening

Cai Wei, Master
Li Xiangyi, Ph.D.
Ma Quanjun, Ph.D. Candidate
Wei Yuanying, Ph.D.

Cai Wei, Master in Business Administration, International School, Krirk University, Bangkok, Thailand. Li Xiangyi, Doctor in Economic, School of Economics and Management, Hubei University of Technology, Wuhan, Hubei, China. Ma Quanjun, Ph.D. Candidate in Economic, School of Business Administration, Wuhan, Hubei, China. Wei Yuanying, Doctor of Management, Doctoral Research Workstation of China Guangfa Bank, Guangzhou, Guangdong, China; School of Economic, Jinan University, Guangzhou, Guangdong, China. Correspondence author: Ma Quanjun; vcma2018@163.com.

Objectives: The construction of high-speed railway (HSR) in China has developed rapidly in recent years, and the opening of high-speed railway has had a significant impact on the economic development of the region and has profoundly affected the development of regional enterprises. Based on the data of Chinese A-share listed companies from year 2004 to 2017, this paper examines whether the opening of high-speed railway has an impact on the degree of financialization of corporates. The results show that the opening of high-speed railway significantly boosts the financialization level of enterprises, and this effect is most obvious two years after the opening of high-speed railway, with significant regional heterogeneity and corporate ownership heterogeneity, and mainly occurs in high financing constrained enterprises and low technology enterprises. Finally, the paper proposes corresponding countermeasures in response to the research findings.

Key words: China's high-speed railway; corporate financialization; markup percentage; employment effect
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INTRODUCTION

China is the third largest country in the world in terms of land area, therefore the transportation cost between China's regions is often higher than other country. However, the transportation infrastructure is being built rapidly, especially the HSR has greatly shortened the transportation time between regions. By the end of 2019, China's HSR network had covered more than 550 cities across the country, with the total length exceeding 35,000 km and the total number of passengers carried exceeding 10 billion. Connecting different cities through HSR can greatly reduce travel time between different regions, enhance the accessibility of cities along the route, and the flow of labor and capital becomes more fluid, allowing human, material and financial resources to spread from big cities to cities along the route.

The construction of HSR also has many implications for corporates. On the one hand, the

opening of HSR will directly reduce transportation costs and thus increase revenues, on the other hand, the opening of HSR will improve the employment structure and investment of businesses in a region.[1] In addition, inter-corporate communication and financing activities often rely on face-to-face communication, which may have an impact on corporates' financial asset holdings.

Financialization of corporates refers to the phenomenon that the real economy sector participates in financial investment and the percentage of financial returns in economic profits increases.[2] It is the current market trend for corporates to invest more or rely on the financial market. Chinese corporates' financialization started late and the overall financialization level is low. By appropriately increasing the level of corporate financialization, corporates can effectively avoid liquidity risks, reduce the risk of capital crunch and promote the high-quality development of the real economy.[3] However, it is also pointed out that the essential function of finance is to serve the real economy. When financial development exceeds a reasonable threshold, it will change from promoting economic growth to inhibiting economic growth.[4] Some scholars believe that the financialization of corporates will make the capital used for investment and gambling economic activities, and is adverse to the development of the real economy. The 2008 U.S. subprime mortgage crisis, to a certain extent, also reflects the negative effects of the financialization of the economy and the financialization of corporates. The financialization of corporates has two sides, which is more meaningful for China as a developing country to explore.

A number of studies have now confirmed the significant impact of the opening of HSR on trade and total factor productivity.[5,6] However, the impact of HSR opening on the financialization of corporates has not been revealed clearly. Therefore, this paper attempts to systematically examine the impact of the opening of urban HSR on the financialization of corporates and its mechanism of action based on the accurate measurement of the markup percentage of Chinese A-share listed companies from 2004-2017. This research not only helps to explain the real impact of transportation and geographical location on the financial development of corporates, but also has very important theoretical significance and practical value for understanding how to improve the financial structure as well as the market competitiveness of enterprises through external factors and geographical advantages.

LITERATURE REVIEW AND THEORETICAL HYPOTHESIS

Transportation infrastructure development is an important factor which driving regional economic growth. The improvement of transportation infrastructure can reducing transportation costs. That is to say, the most direct impact of the opening of HSR is to change the traffic situation between regions, which helps to deepen the openness between regions and connect the isolated regions more closely.[6]

Motivations for corporate financialization include enhancing profitability.[3] ensuring the liquidity of working capital[9] and shareholder values, among others. Based on the profit-chasing motive, when the return on financial investment is higher than the return on investment in the nonfinancial sector, corporates will be induced to gradually shift their capital allocation to the financial sector and enter the overprofit industry for arbitrage by buying and selling financial assets or participating in financial institutions. Especially for Chinese corporates, which are experiencing rapid development as well as internationalization, the volume of financial assets of corporates in the real sector itself is not high, therefore, a certain degree of financialization can be beneficial for enterprises to carry out innovative activities and improve their productivity.

Is there also a relationship between the degree of financialization of businesses and the convenience of transportation? First, the opening of HSR has increased the convenience for residents to learn about financial institutions in person, which is conducive to their access to more information. With the continuous development of the economy and Internet finance, residents' demand for financial investment is also gradually increasing. The increase in residents' demand will lead to the rapid development of financial institutions, which in turn will enable corporates to access more financial resources, thus increasing the proportion of financial assets in the assets of corporates. Otherwise, the improvement of transportation

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infrastructure reduces the costs of enterprises, and improves the profitability of enterprises by saving their costs, which to a certain extent will be reflected in the change of enterprise markup percentage, which has an important correlation to the asset allocation and business arrangement of enterprises. The improvement of transportation infrastructure can promote the mobility of enterprise personnel, provide convenience for enterprise travelers, and facilitate cross-regional employment of local residents, thus improving the employment structure.

Therefore, we further explore the impact of the opening of HSR on the financialization of corporates from both employment and corporate 'cost-plus' perspectives.

From the perspective of employment effects, the time-space compression effect caused by the opening of HSR extends the effective reachable space of the population and promotes the mobility of the population,[7] especially the mobility of talents with high business travel frequency. This greatly improves the frequency and efficiency of analysts' field research communication, provides stakeholders with research reports with higher information content, and not only effectively alleviates the information asymmetry between firms and stakeholders, but also effectively inhibits the behavior and motivation of firm managers to engage in opportunistic, cities connected to the HSR network experienced a significant growth in the employment.[8] However, it has also been pointed out that the opening of HSR may also lead to an outflow of resource factors from the peripheral regions and a decrease in economic growth rate due to labor migration.[9]

Analyzed from the perspective of corporate markup, the opening of HSR may accelerate factor flows through increased investment in fixed assets and foreign direct investment, thus increasing the potential of the market, and diversified financial asset allocation allows corporates to engage in effective hedging and risk avoidance, which in turn enables them to take more risks in innovation and R&D activities and achieve technological upgrading and efficiency improvement,[10] which are reflected in their markup percentage. By learning from other corporates in the region with strong financing ability and high investment efficiency, corporates can improve their responsiveness to external environmental dynamics and reduce the transaction costs caused by information search and erroneous transactions, so as to improve their own financing ability and investment returns, which in turn will increase their financing ability and investment returns. The increase in financing capacity and investment returns will further promote the increase in the proportion of financial assets held by corporates.

From these two perspectives, the opening of HSR is likely to affect the level of financialization of corporates through employment effects and changes in corporate markup. But this effect is also likely to be regionally heterogeneous. First, high-end factors usually choose central areas with higher payoffs.[11] but if spatio-temporal costs fall, then high-end factors in central cities can earn higher returns by expanding factor production. Therefore, the opening of HSR will also lead to geographical agglomeration effect.[12] Second, for developed regions, the opening of HSR disperses some of its geographical advantages to a certain extent, generating a decentralization effect that can better promote non-central cities.[13] For the corporates in central and western regions of China, the opening of HSR facilitates faster intercommunication with other regions.

Based on the analysis above, we proposes hypothesis H1.

H1: The opening of HSR promotes the financialization of corporates.

STUDY DESIGN

Data Sample

This paper selects Chinese A-share listed companies from 2004-2017 as the research sample, and for the empirical analysis, the following treatments are applied to the sample data: first, the listed companies in finance, insurance, and real estate are removed; second, the listed companies in ST category are removed; third, to eliminate the interference of extreme values, winsorizing 5% above and below for all continuous variables at the company level. The financial data of related companies are obtained from CSMAR database, and the missing samples are completed based on WIND database. Finally, a total of 16,804 observation samples are obtained. Combining enterprise data with provincial macro data based on

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the province where the enterprise office address is located. Macroeconomic data are from the WIND database.

The reasons for selecting listed companies for research are as follows: first, easy access to data; second, listed enterprises are relatively rich in funds. When private finance acts as a bridge of capital circulation between enterprises, listed enterprises are more likely to be the investor, and the impact of private finance on the financialization of real enterprises will be more reflected in these enterprises with relatively light financing constraints.

Model Design and Variable Definition

Referring to the study of Bertrand & Mullainathan(2003),[14] a DID (difference-in-difference) test model with multiple time points was established. In order to avoid the possible influence of individual heterogeneity and time-varying of corporate financialization, this paper also controls the individual and annual fixed effects of the company, in order to investigate the impact of HSR opening on corporate financialization, the model is as follow:

$$fin_{it} = \alpha + \beta HSR_{it} + \gamma cv_{it} + f_i + y_t + \varepsilon_{it} \quad (1)$$

The explained variable fin_{it} represents the financialization degree of the corporate, and HSR_{it} represents whether the corporate where it's located has HSR. If the HSR is opened, the value is 1; if not, the value is 0 is the control variable. See Table 1 for specific variable symbols and calculation methods. and are individual and year fixed effects respectively, and is a random error term.

The financialization of corporates is defined by the proportion of financial assets held by corporates in total assets. Financial assets include transactional financial assets, buy-and-resale financial assets, loan issuance and advance, financial assets available for sale, hold-to-maturity investment and investment real estate.

The main explanatory variable is opening data of HSR. The data of this study is derived from the Chinese Research Data Services (CNRDS) Platform. Referring to previous studies, this paper controls for a series of variables that vary over time. Company age (Inage) is expressed as the natural logarithm of the year of investigation minus the number of years of establishment; Company size (lnSale) is expressed by the logarithm of the total sales of the corporate in the current year; Corporate cash (cash) is expressed as the proportion of corporate cash to total assets. Corporate profitability (ROA), expressed as net profit/total assets. Capital structure (tl), expressed as total liabilities/total assets. Asset structure (tang) is expressed as the proportion of the sum of net fixed assets and net inventory to total assets.

Descriptive Statistics

Table 1 shows that the financialization level of Chinese A-share listed companies is all below 10%, and the average value is 0.8%, which is less than 1% and not high overall. Descriptive statistics of other control variables were basically in line with expectations.

Table 1: Descriptive Statistics

VARIABLES	N	Mean	Sd	Max	Min
fin	16824	0.00821	0.0197	0.0762	0
HSR	16824	0.575	0.494	1	0
lnage	16824	2.572	0.443	3.912	0.693
lnSale	16824	21.39	1.481	28.69	11.12
cash	16824	0.160	0.0990	0.392	0.0323
tl	16824	0.483	0.180	0.805	0.175
roa	16824	0.0345	0.0395	0.112	-0.0559
tang	16805	0.419	0.165	0.717	0.137

EMPIRICAL ANALYSIS AND RESULTS

Baseline Regression

Table 2 shows the regression results of the impact of HSR opening on the financialization of corporates. The results show that there is a significant positive correlation between HSR and the financialization degree at the level of 5%, which indicates that the HSR has promoted the financialization of listed companies' assets, and verifies the basic hypothesis 1 of this paper.

Among the control variables, the indicators related to corporate assets are all negatively

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correlated with the financialization of corporates, which further indicates that financial assets only account for a small part of corporates, and the assets of China's A-share listed companies are mainly non-financial asse

Robustness test

Parallel trend test

The difference-in-difference strategy requires satisfying the parallel trend assumption, which assumes that the financialization in the treatment and control groups have the same growth trend in the counterfactual case of no HSR. Referring to the study of Bertrand, the following model is constructed to verify whether the parallel trend assumption is satisfied:

$$finratio_{it} = \alpha + \beta_1 HSR_{it-1} + \beta_2 HSR_{it} + \beta_3 HSR_{it+1} + \beta_4 HSR_{it+2} + \beta_5 HSR_{it+3} + \beta_6 HSR_{it+3} + f_i + y_t + \varepsilon_{it} \quad (2)$$

HSR_{it} is defined as the value of 1 in the year(t), otherwise it is 0. Others are similar.

The regression results are shown in Table 3. It can be seen that the coefficients of $HSR_{it-1}, HSR_{it}, HSR_{it+1}$ in the column are not significant, the coefficients of HSR_{it+2}, HSR_{it+3}, and are significantly positive, indicating that the number of corporates' financialization begins to increase significantly two years after the opening of HSR. In short, the results in Table 3 show that the treatment group (cities with HSR service) and the control group (cities without HSR) have the same trend before the event, satisfying the parallel trend hypothesis, which also shows that the DID estimation used in the basic regression is effective.

Table 2: Baseline Regression Result

VARIABLES	(1) Fin	(2) Fin
HSR	0.0011**	0.0011**
	(0.000)	(0.000)
lnage		-0.0055***
		(0.001)
lnSale		-0.0014***
		(0.000)
cash		-0.0087***
		(0.002)
tl		-0.0041***
		(0.001)
roa		0.0076
		(0.005)
tang		-0.0128***
		(0.001)
Constant	0.0077***	0.0597***
	(0.000)	(0.006)
Firm fixed effect	YES	YES
Year fixed effect	YES	YES
Observations	16,497	16,481
R-squared	0.4702	0.4761

Note.
Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

Table 3: Parallel Trend Test

VARIABLES	(1) fin
HSR_{it-1}	-0.0005
	(0.001)
HSR_{it}	-0.0004
	(0.001)
HSR_{it+1}	-0.0006
	(0.001)
HSR_{it+2}	0.0014**
	(0.001)

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HSR_{it+3}	0.0015***
	(0.001)
HSR_{it+4}	0.0010*
	(0.001)
Constant	0.0081***
	(0.000)
Observations	16,497
R-squared	0.4708

Note: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

Dynamic effect test

In order to observe the dynamic change process before and after the opening of HSR, this paper constructs a dynamic effect model. The sample value of the year before the opening of the HSR in the city where the enterprise locates is 1; otherwise, it is 0. is a dummy variable, and the sample value in the year when the HSR is opened in the city where the enterprise is located is 1; otherwise, it is 0. is a dummy variable, and the sample value of n years after the operation of HSR in the city where the enterprise is located is 1; otherwise, it is 0.

The regression results are show in Table 4, we find that the positive impact of HSR opening on corporate financialization manifests itself one or even two years after the opening of HSR, and the significance tends to increase two years after the opening of HSR, while it is not significant before and in the year of HSR opening, further verifying the reliability of the main regression findings.

Table 4: Dynamic Effect Analysis

VARIABLES	(1) fin	(2) fin	(4) fin	(5) fin	(6) fin	(7) fin
HSR_{it-1}	0.0016					
	(0.001)					
HSR_{it-2}		-0.0019				
		(0.001)				
HSR_{it}			-0.0018			
			(0.001)			
HSR_{it+1}				-0.0034**		
				(0.001)		
HSR_{it+2}					0.0039***	
					(0.001)	
HSR_{it+3}						0.0034**
						(0.001)
Constant	0.2464***	0.2481***	0.2479***	0.2490***	0.2555***	0.2459***
	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)	(0.032)
Control variables	YES	YES	YES	YES	YES	YES
Firm fixed effect	YES	YES	YES	YES	YES	YES
Year fixed effect	YES	YES	YES	YES	YES	YES
Observations	15,142	15,142	15,142	15,142	15,142	15,142
R-squared	0.4462	0.4462	0.4462	0.4464	0.4465	0.4464

Note: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

Retain Samples with a Duration of Ten Years or More

Since some corporates have not always existed during 2004-2017, the existence of this part of the corporates may have an impact on the regression results, so samples with a duration of more than 10 years are retained here, and the results are shown in Table 5, which shows that the regression results are still significant, but the coefficient of the key explanatory variable HSR has slightly increased, that is, after removing the sample of corporates with low duration, the promotion effect of HSR opening on the level of financialization of corporates has increased, which may be due to the fact that corporate with shorter duration have the smaller scale and less financial market behavior, and their own assets are mainly used for main business and less financial activities. Corporates with shorter duration are not representative, and when these corporates are excluded, the regression results also reflect a more realistic situation.

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Table 5: Retain Samples with a Duration of Ten Years or More

VARIABLES	(1) r1	(2) Ten years duration
	fin	fin
HSR	0.0015**	0.0014**
	(0.001)	(0.001)
Constant	0.0083***	0.0757***
	(0.000)	(0.010)
Control variables	YES	YES
Firm fixed effect	YES	YES
Year fixed effect	YES	YES
Observations	9,785	9,785
R-squared	0.4577	0.4649

Note: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

Hysteresis Effect

Although the opening of HSR is immediately put into use, corporates need to go through the strategic planning to take advantage of the convenience brought by the opening of HSR, so the impact of the opening of HSR may have a certain time lag. In order to test whether there is a time lag in the impact of the opening of HSR on the financialization of corporates, we test it by generating the first-phase lag term and the second-phase lag term of the opening of HSR, and construct the econometric model as follows (as is shown in Table 6):

$$fin_{it} = \alpha_f + \beta_1 l.HSR_{it} + \lambda_t + \gamma X + \varepsilon_{ft} \quad (3)$$

$$fin_{it} = \alpha_f + \beta_2 l2HSR_{it} + \lambda_t + \gamma X + \varepsilon_{ft} \quad (4)$$

Table 6: Hysteresis Test

VARIABLES	(1) fin	(2) fin	(3) fin	(4) fin
L.HSR	0.0021***	0.0019***		
	(0.000)	(0.001)		
L2.HSR			0.0026***	0.0027***
			(0.001)	(0.001)
Constant	0.0081***	0.0751***	0.0088***	0.0532***
	(0.000)	(0.010)	(0.000)	(0.012)
Control variables	YES	YES	YES	YES
Firm fixed effect	YES	YES	YES	YES
Year fixed effect	YES	YES	YES	YES
Observations	13,201	13,000	11,204	10,929
R-squared	0.1584	0.5090	0.1569	0.5171

Note: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

The results are shown in Table 10. Combined with the results of dynamic effect test, it can also be known that there is a certain lag effect, and the impact of the opening of HSR is greater two years later.

Heterogeneity Test

Regional heterogeneity

As enterprises are affected by different regional policies and geographical locations, this paper divides enterprise samples into eastern, central and western parts according to geographical location for regression, as can be seen from the results in Table 7. Only the regression coefficients of the central and western regions are still significantly positive, while the coefficients of the eastern regions are not significant.

The opening of HSR has reduced the transportation costs of various regions, but the impact of the opening of HSR is not so great in eastern China, where the transportation is relatively

convenient and the regional economic development is relatively high.

Table 7: Heterogeneous Effects (Region)

VARIABLES	(1) East	(2) Central part	(3) West
	fin	fin	fin
HSR	-0.0001	0.0020**	0.0021*
	(0.001)	(0.001)	(0.001)
Constant	0.0834***	0.0631**	0.1183***
	(0.017)	(0.025)	(0.032)
Control variables	YES	YES	YES
Firm fixed effect	YES	YES	YES
Year fixed effect	YES	YES	YES
Observations	9,889	3,094	2,159
R-squared	0.5079	0.4741	0.4747

Note: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

Ownership heterogeneity

Through grouping tests of different ownership properties, we generally conclude that state-owned enterprises have the characteristics of absence of owners and policy burden. This will lead to a lack of long-term investment undertakings and thus a lower degree of financialization. Therefore, the conclusion of this paper may be influenced by the nature of different ownership.

Table 8 shows that the significant correlation between the opening of HSR and the financialization of enterprises is mainly reflected in non-state-owned enterprises, especially sino-foreign joint ventures, while the HSR coefficient of the sample of state-owned enterprises is not significant. It shows that the opening of HSR has a more significant role in promoting the financialization of sino-foreign joint ventures.

Table 8: Ownership Heterogeneity

VARIABLES	(1) state-owned enterprises fin	(2) sino-foreign joint ventures fin	(3) private enterprises fin
HSR	-0.0014	0.0014**	-0.0001
	(0.004)	(0.001)	(0.001)
Constant	0.1576***	0.0726***	0.0934***
	(0.056)	(0.010)	(0.013)
Control variables	YES	YES	YES
Firm fixed effect	YES	YES	YES
Year fixed effect	YES	YES	YES
Observations	598	9,404	6,314
R-squared	0.4933	0.4719	0.5014

Note: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

Technical heterogeneity

Enterprises with different technical levels have different demands for financialization, and the opening of HSR plays different roles for enterprises in different industries. This paper conducts group inspection according to the standard of high-tech enterprises. Enterprises with different technical levels may play a limited role in the financialization of enterprises.

This paper distinguishes whether a listed company is a high-tech enterprise (including: information technology industry, pharmaceutical manufacturing industry, chemical raw materials and chemical products manufacturing industry, electrical machinery and equipment manufacturing industry, transportation equipment manufacturing industry, and special machinery manufacturing industry) based on China's 2008 "Management Measures for the Recognition of High-tech Enterprises". The grouping results in Table 9 show that the significant correlation between the opening of HSR and the existence of enterprise financialization is mainly reflected in the group of low-tech enterprises, while it is not significant in the group of high-tech enterprises. It can be seen from the data of listed companies that there are a

large number of enterprises in agriculture, food processing industry, and chemical industry, which mostly belong to low-tech industries, but have higher requirements for transportation than other high-tech industries, which may be one of the reasons why the sample coefficient of low-tech industries is significant.

Table 9: Different Technology Industries

VARIABLES	(1) High-tech industry	(2) Low-tech industry
	fin	fin
HSR	0.0009	0.0012*
	(0.001)	(0.001)
Constant	0.0509***	0.0829***
	(0.011)	(0.011)
Control variables	YES	YES
Firm fixed effect	YES	YES
Year fixed effect	YES	YES
Observations	6,813	9,668
R-squared	0.4479	0.4941

Note: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

Heterogeneity of financing constraints

Tests grouped by the level of financing constraints. A corporate's financial activities depend heavily on its ability to obtain adequate external equity and debt financing. The financialization of corporates is a long-term and continuous process, so financing constraints can have an important impact on the financialization of corporate.

This paper used the KZ index to measure the financing constraint, and the larger the index indicates the more severe financing constraint. The regression results in Table 9 show that the significant correlation between HSR opening and the existence of corporate financialization is mainly in the group of corporates with high financing constraints, while none of them is significant in the group of corporates with low financing constraints.

Table 10: Different Financing Constrained Industries

VARIABLES	(1) high financing constraints	(2) low financing constraints
	fin	fin
HSR	0.0011*	0.0013
	(0.001)	(0.001)
Constant	0.0778***	0.0539***
	(0.009)	(0.020)
Control variables	YES	YES
Firm fixed effect	YES	YES
Year fixed effect	YES	YES
Observations	11,875	4,003
R-squared	0.4962	0.5777

Note: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

Further Analysis

Based on the previous theoretical analysis, this paper attempts to explore the role of corporate markup percentage and employment in the impact of HSR opening on corporate financialization.

Markup percentage

From column (2) of Table 11, the opening of HSR significantly reduces the markup percentage of corporates, and in column (3), the markup percentage of corporates also has a significant inhibitory effect on the financialization of corporates, but the promotion effect of HSR opening on the financialization of corporates is significantly greater when controlling for the cost-plus rate of corporates, indicating a suppression or inconsistent mediation of the markup percentage in the effect of HSR opening on the financialization of corporates.

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The possible reason for this phenomenon is that a corporate's markup percentage reflects, to some extent, a corporate's pricing power and market position, and the higher a corporate's market pricing power, the more the corporate may focus on non-financial markets. The opening of HSR is likely to allow other corporates with competitive advantages to flow into the local market, making the corporate's market pricing power decrease.

Table 11: Test: Markup Percentage

VARIABLES	(1) fin	(2) markup1	(3) fin
HSR	0.0011**	-0.0162***	0.0027**
	(0.000)	(0.005)	(0.001)
markup1			-0.0051**
			(0.002)
Constant	0.0717***	-3.6629***	0.1491***
	(0.008)	(0.085)	(0.022)
Control variables	YES	YES	YES
Firm fixed effect	YES	YES	YES
Year fixed effect	YES	YES	YES
Observations	16,481	16,481	16,481
R-squared	0.4763	0.8521	0.4231

Note: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

Employment

A very significant impact of the opening of HSR is the facilitation of labor mobility, so employment may also be an important mechanism by which the opening of HSR affects the financialization of corporates.

In this paper, the results shown in Table 12 are obtained by stepwise regression method. From the results in column (2), it can be seen that the opening of HSR significantly increases local employment, while the promotion effect of the opening of HSR on the financialization of corporates increases significantly after adding the local employment indicator in column (3) again, which also indicates that there is a suppression or inconsistent mediation of employment in the impact of the opening of HSR on the financialization of corporates.

Table 12 :Test: Markup Percentage

VARIABLES	(1) fin	(2) lnemploy	(3) fin
HSR	0.0011**	0.1210***	0.0023*
	(0.000)	(0.009)	(0.001)
lnemploy			0.0034***
			(0.001)
Constant	0.0717***	13.2712***	0.1241***
	(0.008)	(0.138)	(0.027)
Control variables	YES	YES	YES
Firm fixed effect	YES	YES	YES
Year fixed effect	YES	YES	YES
Observations	16,481	16,217	16,217
R-squared	0.4763	0.9614	0.4230

Note: Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1 respectively.

CONCLUSION AND POLICY SUGGESTION

Research Conclusion

The regression results show that the opening of high-speed railway significantly promotes the financialization of corporates, and the results pass a series of robustness tests, and this effect has significant heterogeneity, mainly in the central and western enterprises, and in the enterprises with high financing constraints and low technology level. The promotion effect has a significant lag effect and is greatest two years after the opening of HSR. In addition, the size of employment and the markup percentage further amplify the boosting effect of HSR opening on corporate financialization.

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Policy Suggestion

The opening of high-speed railway has brought many benefits, and the financialization of corporates is a controversial topic. A certain degree of financialization can enable corporates to increase profitability, avoid some financial risks, and enhance asset liquidity. However, excessive financialization may crowd out productive capital and make it difficult to consolidate the market position of corporates.

Therefore, corporates should actively adjust according to their own situation. For corporates in the more developed economic and transportation regions, improving the market competitiveness of corporates and improving the technical level of their employees is a better way to promote the financialization of corporates, and only by occupying a certain market position and having a higher level of employment can the results of financialization serve the development of corporates. As for the less developed areas and low-technology level enterprises, they should seize the opportunities of transportation improvement such as the opening of high-speed railway, expand their own manpower reserves through the introduction of talents, and at the same time strengthen the communication between corporates in various regions.

Study Limitations

Our study has some limitations about which readers should be cautioned. First, we used convenience sampling method, which may have resulted in selection bias. Additionally, the study sample is relatively small; thus, future research is recommended in a more heterogenous and larger group. Moreover, there are many measures of corporates' financialization. We only choose one of them, which may cause some deviation.

Conflicts of Interest Disclosure Statement

The authors declare no conflict of interest in the authorship or publication of this work.

Author Declaration

The authors declare no sponsored financial sources by any organization related to tobacco production for the undertaken study.

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