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Research Article

The Shared Transportation Industry in China: Examining the Influence of Regional Environmental Factors on New Venture Formation

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China's shared transportation industry is leading innovation, driving employment, and promoting regional economic growth. China's aggressive efforts to promote the development of various transportation sectors motivate our investigation of this emerging industry. We examine the influence of regional environmental factors on new venture formation using a dataset encompassing newly established bike-sharing startups in 257 cities in China from 2015 to 2019. The empirical results show that entrepreneurial capital, entrepreneurial support policies, and urban auxiliary infrastructure positively impact the formation of new ventures. However, no significant relationship exists between industrial policy, competitive urban infrastructure, and new business formation. This study expands the scope of the existing research studying the characteristics of entrepreneurial space, offers inspiration for future startups entering the field of shared transportation in choosing entrepreneurial locations, and provides theoretical guidance for the government in formulating policies to attract entrepreneurial activities.

1. Introduction

The concept of the sharing economy has promoted the emergence of a new consumption model that has globally become popular due to its successful performance in addressing wasted resources caused by overcapacity [1]. The sharing economy has also promoted the emergence and popularization of a new business model. The emergence of the internet allows platforms to integrate offline idle goods or personal services with network technology and to provide them to users at a lower price. The commercial operation of internet network platforms such as Uber and Airbnb marked the beginning of the sharing economy. These firms not only led the development of the global sharing economy while enlightening the world about its potential but also provided a realistic foundation for a feasible business model for the sharing economy.

The sharing economy in China has rapidly developed in the past decade, playing an essential role in promoting economic growth, employment, innovation, and sustainable urban development. The sharing economy has become one of China's national economic development strategies and a vital driving force in the transformation and development of the service industry. In particular, the great attention and participation of the entire population in the sharing of transportation have made it an inseparable part of the daily life of ordinary people. Shared transportation alleviates traffic congestion, reduces environmental pollution, and satisfies short-distance travel needs. Consumers and government agencies in all regions have welcomed shared transportation services, and the industry has experienced tremendous growth by forming new ventures.

Entrepreneurship has always been regarded as an important means of promoting sustainable economic

development [2]. The higher the entry rate of new enterprises, the fiercer the competition will be, which is conducive to economic growth. Economic development practitioners and public decision-makers have focused their attention and resources on activities that support entrepreneurship to promote the development of local economies.

Prior empirical studies indicate that a large agglomeration trend can significantly differ in entrepreneurship rates in different countries and regions [3–6]. Regional differences in entrepreneurship rates are interpreted as differences in available or identifiable opportunities [7]. The entrepreneurship research on the regional dimension is premised on entrepreneurial opportunities in the regional environment. The entrepreneurial environment, such as the intermediary between entrepreneurs and their place of entrepreneurship, its relative merits, and the number of entrepreneurial opportunities, has a direct role in determining regional entrepreneurial activities.

Many regional determinants affecting the formation of new firms have been empirically validated. Examples of such determinants include the availability of venture capital, a skilled workforce, proximity to universities, the availability of support services, unemployment level, employment opportunities, the availability of productive resources, efficient public infrastructure, knowledge and R&D, human resources, population growth, economic base, local government support and policies, and agglomeration effects [8–13]. However, the existing studies focusing on the influence of the regional environment on the formation of new ventures have mainly considered the United States or European countries such as the United Kingdom, the Netherlands, and Italy. In recent years, the startup rate in China has dramatically increased, and the nascent GEM [14] report scored China with 5.3 points for its nascent entrepreneurship rate, ranking it 34th worldwide. China's entrepreneurial environment and urban infrastructure are also improving. However, under China's political background, the influence of the existing entrepreneurial environment on the formation of new ventures has never been deeply explored. Empirical research on regional differences in specific industries is also a field neglected by scholars [15, 16].

This study aims to fill this gap. We discuss whether and why the regional environment is important for an industry where market demand exceeds expectations and is almost unconstrained by space. This background is highly relevant to the future development of the shared transportation industry, the implementation of regional strategic management, and the cultivation of regional entrepreneurship. Combining the development characteristics of the shared transportation industry and China's period of rapid growth, we consider three aspects of the literature stream: venture capital, local government support and policies, and public infrastructure. Using a dataset of 307 bike-sharing startups in 257 Chinese cities from 2015 to 2019, we demonstrate the importance of regional environments for new venture formation. In other words, we find that regional venture capital, entrepreneurial policy, and urban auxiliary infrastructure are good predictors of the formation of new ventures, but we find no evidence for the effectiveness of industrial policy and competitive urban infrastructure in startup promotion or restraint.

This study proceeds according to the following structure. The second section reviews the previous research and proposes hypotheses. The third section introduces the research methods, and the fourth section collates the analysis results. The fifth section is the discussion part. The sixth section is the conclusions, limitations, and future research directions.

2. Regional Determinants of Entrepreneurship

2.1. Regional Entrepreneurship. In recent years, entrepreneurs have created employment opportunities, introduced new innovations, and made significant contributions to regional economic development. Regional entrepreneurship has become an important means of promoting regional economic development. This has attracted many scholars devoted to studying the topic [6, 17–19]. Scholars in various disciplines, such as regional economic sociology, management, and geographic economics, have conducted in-depth studies on the relationship between entrepreneurship and regional development from different perspectives. Each discipline has focused on the influence of regional characteristics on the formation of new firms. The first type of research emphasizes traditional industrial organization theory and investigates the impact of industrial structure on the ability to establish new enterprises. In particular, the industrial organization approach is used to test whether the market structure hinders or accelerates the formation of new firms [20, 21]. The other type of research takes labor market theory as a starting point. Regional conditions often affect the entrepreneurship rate among enterprises, so the local social and economic environment is crucial for cultivating entrepreneurship [22]. This study explores the impact and importance of the market environment and social variables on entrepreneurial decision-making based on labor market theory.

2.2. Venture Capital. Although venture capitalists seek out the most promising new ventures for investment, there is a highly localized investment pattern in selecting investment opportunities [23–25]. The two roles of venture capitalists can explain this. The first is the preinvestment role, which mainly focuses on identifying and evaluating opportunities. The second is the postinvestment role, which facilitates the monitoring of new ventures and provides value-added services to investee firms [26].

Venture capitalists have two important tasks to accomplish when looking for an investment target. First, venture capitalists must have access to information about the existence of investment opportunities and their characteristics. Second, they must be able to assess the quality of these opportunities [26]. In every stage, from seeking investment opportunities to evaluating those opportunities, these tasks cannot be separated from the interpersonal relationships in the social network because these relationships are the primary path for information transmission within the

community of actors. Some sociological studies have provided the theoretical basis for this behavior, for example, Granovetter's [27] strength of weak ties theory and Burt's [28] structural holes theory. According to these theories, the strength of social networks and the structure of professional relationships influence the identification of investment opportunities by venture capitalists. Venture capitalists usually obtain timely information about high-quality investment opportunities in the field through their network relationships. The limited diffusion of reliable information among networks plays a central role in forming venture capital exchange relationships [26]. At the same time, because social relationships tend to form in geographical and social spaces, network relationships will positively influence the distribution space of investment activities in terms of generating indications regarding investment opportunities.

The role of venture capitalists or venture capital institutions after investment can also explain the phenomenon of investment localization. In addition to providing financial support to investment targets, venture capitalists also need to provide expertise to startups and monitor their management after selecting investment targets. Venture capitalists spend much time building and strengthening their social networks so that they can monitor the activities of other venture capital firms and markets [29]. The effective geographic radius over which insurance investment companies tend to invest has been found to be limited to a travel time of one to two hours from their offices [30]. Geographical proximity helps reduce the travel time and material cost of monitoring. It can also improve the relationship with the investment company and avoid communication conflict between the managers or entrepreneurs at the target firm to reduce agency problems and ultimately achieve the expected returns on the investment goals.

Due to the localized investment characteristics of venture capital, to increase the likelihood of receiving investment, startups treat proximity to local venture capital firms as a strategic means to obtain venture capital. The history of the development of China's shared transportation industry shows that it has been highly dependent on the support of venture capital. Therefore, in this case, the activity of various regional venture capital institutions will profoundly impact the formation of shared transportation startups. Consequently, we propose the following hypothesis:

H1: Venture capital activity in various regions will positively impact the formation of shared transportation startups.

2.3. Policy Environment. The positive effects of government policies on entrepreneurial formation can be explained by the outsider assistance theory [31, 32]. The assistance theory begins with the assumption that the knowledge possessed by entrepreneurs or teams of entrepreneurs is the most critical advantage held by new ventures. However, no entrepreneur has perfect knowledge, so the knowledge and other resource gaps must be addressed through preparation before and during the initiation process. Therefore, entrepreneurs often increase their knowledge in two ways: through preparation or seeking outside advice or mentoring. Both are valuable means of acquiring knowledge; however, each method has its limitations, so a third method is proposed: preparing for entrepreneurship through professional guidance, which can minimize or eliminate the respective limitations of the entrepreneur and produce the greatest benefit. External assistance can be used as a knowledge resource, and the provision of guidance during the entrepreneurial process can affect new venture performance [31, 32]. This theory is applied to the startup phase of the entrepreneurial process and is used to test whether a connection with external assistance programs and a relationship with entrepreneurs who have already conducted planning activities such as market research, business plans, and financial plans will contribute to startup results.

The most common form of external assistance is government policy assistance. Government assistance is considered as a means of encouraging knowledge spillovers or positive externalities (social returns exceed private returns) [33]. Storey [34] believed that although entrepreneurs were motivated to acquire knowledge, they could not quickly gain the knowledge or experience they needed without government-funded assistance programs. Government policy support also reduces the capital cost of new enterprises when they acquire knowledge resources. The Chinese government has issued various intervention-type policies to help small- and medium-sized enterprises or startups to develop and become established. Small- and medium-sized enterprises and startups are also receptive to preferential treatments and benefits from government policies. The Chinese government has also given strong support to entrepreneurs. According to the 2016 Global Entrepreneurship Index, China ranks 3rd among 62 countries regarding the impact of government policies and related support on entrepreneurship. The Chinese government's support for entrepreneurship is mainly embodied in some specific micropolicies that focused on supporting groups or individuals to solve business-related or social problems. Micropolicies are mainly reflected in the following four aspects: entrepreneurship training, facilities, loans, tax reduction, and entrepreneurship exemptions. These policies have created a good entrepreneurial environment and have significantly helped new enterprises.

In the context of "mass entrepreneurship and mass innovation," the Chinese government has also formulated support plans for entrepreneurship according to the characteristics of various industries, especially the sharing economy, including the shared transportation industry. As a new green transportation tool, shared transportation has received special attention and support from the government. Specific incentive measures include the rational layout of transportation networks and parking facilities, the establishment and construction of parking spots, and the encouragement of relevant social organizations and industrial technology alliances to develop standards and systems related to the shared transportation industry. Local governments have also signed strategic cooperation agreements with companies to actively introduce shared transportation infrastructure from the government's perspective. All these actions send positive signals and have an essential impact on

the formation of new ventures. Therefore, we propose the following hypotheses:

H2-1: The policies in various regions relevant to the shared transportation industry will positively impact the formation of new ventures.

H2-2: The entrepreneurship policies in various regions will positively impact the formation of shared transportation startups.

2.4. Urban Infrastructure. The relationship between urban infrastructure and entrepreneurship has received little attention from scholars, but a few studies have empirically tested the positive effect of infrastructure on the regional entrepreneurship rate [35, 36].

The primary theoretical basis for the positive impact of infrastructure on the regional entrepreneurship rate is the argument that infrastructure can stimulate entrepreneurial opportunities, promote interaction between industries within regions, and increase the knowledge spillover effect. New entrepreneurs can seize these opportunities by establishing new companies [35, 36]. New infrastructure investment also helps facilitate the flow of capital goods, ideas, and people [35], potentially improving the connections between industries within an area. Increased interaction and connection contribute to the spillover of knowledge. The knowledge spillover effect refers to the correlation effect generated by knowledge receivers and demanders who digest and absorb innovative knowledge and promote enterprise development and economic growth [37]. A stronger knowledge spillover effect within a region means that enterprises acquire more low-cost and valuable knowledge from outside, which is more favorable for the establishment and development of enterprises.

As an external driver, infrastructure investment creates space for new economic activities [38] and supports the development or expansion of growth centers or the aggregation of economic activity in a region [39, 40]. Existing businesses may strategically relocate to an infrastructure-supported growth hub. The development of new infrastructure will also attract risk-takers and proactive entrepreneurs who are alert and ready to act on the exploitable opportunities it brings. In this way, infrastructure investment allows entrepreneurs to build new companies or expand existing ones in newly created or expanded markets [41]. In either case, infrastructure investment can serve as an approach to improving the potential to establish new businesses [36].

As a new means of transportation, shared transportation is a form of urban infrastructure built by private investment. It is a type of urban infrastructure that requires private investment and involves the maintenance and development of public interests, that is, it provides residents with unlimited short-term travel services. When shared transportation emerged in China, the development goals pursued by various companies were to provide more convenient public transportation connections, solve short-distance travel problems, alleviate traffic pressure, and mitigate environmental pollution.

In addition to private cars, the three types of public transportation vehicles, buses, subways, and taxis are the most frequently used in daily travel, but there are alternatives and some competition. With the rise of shared transportation, the shared transportation industry has become a new component of the urban public transportation system. As a transportation tool providing advantages in short-distance travel, shared transportation services largely rely on other public transportation tools, especially traditional tools such as subways and buses. Due to fixed bus and subway routes, bike sharing has become the most convenient and efficient way to connect subway and bus stations with residential areas. According to a survey on the main reasons for shared bike use, 36.8% of users use shared bikes as a part of their commute [42]. In public transportation, taxis offer convenient routes, timing, and location availability, which conflict with the characteristics of shared transportation services, so taxis have become the most direct source of competition. Therefore, in the shared transportation industry, the development of regional transportation infrastructure has become an important factor that must be considered because it affects the formation and future development of new ventures. Therefore, we propose the following hypotheses:

H3-1: The degree of development of a city's auxiliary transportation facilities will positively impact the formation of shared transportation startups.

H3-2: The degree of development of urban competitive transportation facilities will negatively impact the formation of shared transportation startups.

3. Data and Methods

This study uses a dataset of Chinese bike-sharing startups to test the proposed hypotheses. As a typical representative of China's shared transportation industry, bike sharing has become the field with the highest participation among the population. More details about the data collection, independent variables, dependent variables, and data analysis are described below.

3.1. Data. We constructed the bike-sharing enterprise dataset in three steps based on a combination of public data and survey data. In the first step, we identified 509 bike-sharing-related enterprises with business licenses registered in mainland China through the National Enterprise Credit Information Publicity System provided by the State Administration for Industry and Commerce. Second, we used the Tianyancha database to examine the business scope of each enterprise in detail and excluded 116 enterprises that did not include keywords such as sharing, sharing bikes, sharing transportation, or sharing economy. We manually sorted the basic information for each company, including the year of establishment, registered address, and registered capital. A bike-sharing enterprise must have its own brand and app as a precondition to entering the market. This study assumes that the enterprise remains in the product design or strategic deployment stage if there is no app. Therefore, in

the third step, we searched the mobile apps under the name of each enterprise in the Android and iOS mobile app stores, and apps were not found for 83 enterprises. We excluded these enterprises and ultimately created a dataset of 310 bike-sharing startups.

The data relating to Chinese cities are obtained from the China City Statistical Yearbook 2016, 2017, and 2018 released by the National Bureau of Statistics of China. The development of China's coastal and inland provinces is extremely uneven, and the use of provincial-level data will cause serious endogeneity problems. Therefore, we abandon the traditional research method of taking provinces as the unit and instead use cities at or above the prefecture level, representing the main part of China's prefecture-level administrative regions. Of the 297 prefecture-level cities, 38 belonged to the five ethnic minority autonomous regions and were excluded because the cultural customs, administrative policies, and systems in these regions of China are quite different from those of other cities. We also excluded an island and a military city far from mainland China. Ultimately, we identified 257 cities in 22 provinces.

The relevant venture capital data in each region come from the PEdaily database. The PEdaily database is the ZeroIPO's most comprehensive public database on venture capital information in China. There are no specific restrictions on the enterprise characteristics of investment institutions when collecting data, such as the investment field, investment stage, investment nature, and capital type, except that the registration location of the enterprises must be in mainland China. Foreign-funded enterprises that have registered industrial and commercial information in China are also included. The aim is to determine the level of venture capital activity in the region. The data on venture capital firms were eventually collected in all 257 cities.

3.2. Dependent Variable. The dependent variable in this study uses the cumulative number of new bike-sharing enterprises in each city as the measurement unit, excluding the company's branches or the new institutions created by a change in location or name, and the number of cities in which the enterprises have expanded. By the end of 2019, a total of 310 new bike-sharing enterprises had been established in China, of which 3 were not located in the 257 prefecture-level cities ultimately selected in this study. Therefore, these 3 enterprises are excluded, and the distribution of 307 enterprises in various cities in China is analyzed. In this study, bike-sharing startups that are no longer in business or announced their withdrawal from the market are not excluded because such events do not influence the purpose of our study. Cross-sectional data are formed according to the registration time and place of the enterprises.

3.3. Independent Variables. The venture capital variable is a dichotomous variable that captures whether a venture capital institution was registered in the city for industry and commerce as of December 31, 2019. A city with at least one venture capital institution is 1, and a city without a venture capital institution is 0. For the measurement of policy, this study considers two aspects. The first is the support of local governments for the bike-sharing business. The government's support for bike-sharing can be measured by the following two factors: (1) relevant policy documents promoting and encouraging the development of green transportation or bike-sharing in the city have been issued and are published on the websites of various local governments, (2) and bike-sharing projects have been officially introduced in the name of the government. Cities with government support have a value of 1 for this variable, and cities without support are assigned 0. The second aspect is the support given by local governments to startups. The preferential policies provided by local governments for startups include (1) exemption from administrative charges, (2) provision of small secured loans, (3) vocational training subsidies, (4) tax reduction and exemption, (5) rent-free startup space in the local pioneer park, and (6) cancelation of household registration restrictions and house purchase restrictions. Cities that have any of these policies are set to 1, and those that do not are set to 0.

Two variables were used to measure the city's public facilities. As the best solution to short-distance travel, the shared transportation industry is a supplement to public transportation tools such as buses and subways. Therefore, to capture auxiliary transportation facilities in cities, this study measures the density of the mass transportation system by the number of traffic routes in each city using data from China's public transportation information network. Taxis represent the strongest competitor in the shared transportation industry. Therefore, to capture the city's competitive transportation facilities, the second variable is the number of taxi vehicles per ten thousand people. The data come from the China City Statistical Yearbook, and the average number of taxis in each city in 2016, 2017, and 2018 was calculated.

3.4. Control Variables. This study also controls for some of the variables that influence the formation of bike-sharing startups. The development of bike-sharing services cannot be separated from the population and economic conditions of the city, so the population variables and economic variables are controlled. The population variables are population density, i.e., the number of registered residents of the administrative area of the city (unit: square kilometers). The economic variable is the average per capita GDP of each city in 2016, 2017, and 2018. Because Shanghai, Tianjin, and other cities have clear regulations requiring bike-sharing operators to allocate personnel for vehicle maintenance, maintenance, and transportation at a proportion of no less than 5% of the total number of shared vehicles, labor variables are also controlled in this study. The current labor force was measured using the proportion of workers in the tertiary industry. Shared bikes are unshielded vehicles. According to the White Paper on Shared Bikes and Urban Development released by Mobike in 2017, air quality will affect consumers' use intention and usage duration. Therefore, air quality in a city is also

included due to its potential to affect the formation of bike-sharing startups. The average PM2.5 of each city in 2016, 2017, and 2018 was used to measure air quality. As a kind of human capital, well-educated people possess both general labor skills and specialized skills. Areas with a dense representation of citizens with a higher education background will generate more entrepreneurial activities, so we also control the variable representing human capital using the number of college students per ten thousand residents [16].

3.5. Methods. At present, the measurements of entrepreneurship in the existing empirical research are almost all based on the number of new enterprises established [43, 44] or the firm entry rate [16, 45]. The main purpose of this study is to determine the external environmental factors that influence the establishment of shared transportation startups, so it is appropriate to use the number of startups established in each region to measure the degree of entrepreneurial activity. Moreover, the new business model for bike sharing in China was established only 4 years ago, so panel data analysis is not suitable for measurement. Therefore, in this study, the number of new enterprises established is the cumulative number of enterprises established in each region until 2019. These are non-negative integer count data, and the model estimation method should use Poisson's regression.

The basic condition for Poisson's regression is that the mean of the number is equal to its variance. In this study, the mean value of the dependent variable was 1.195, the variance was 20.603, and the variance in the explained variable was greater than the mean value, indicating the existence of overdispersion, which does not conform to the premise of Poisson's regression, so negative binomial regression was used for the estimation. However, the number of new enterprises established in different regions is very unbalanced, and there are a large number of zero values in the data. The excessive overdispersion may also be caused by the high probability of zero, which will lead to the zero-inflation problem. Therefore, a zero-inflation negative binomial regression model is used to test the data. In the zero-inflated negative binomial regression model, the 95% confidence interval of the alpha is (0.364, 1.668), so the null hypothesis of alpha = 0 can be rejected at the significance level of 5%; that is, negative binomial regression can be used. Furthermore, the Vuong statistic is −2.20, $\Pr > z = 0.986$, less than −1.96, and not significant [46], so zero-inflated negative binomial regression is rejected, and standard negative binomial regression should be used. In short, based on the required tests for the above models, negative binomial regression is the most consistent analysis method for testing the data in this study.

4. Results

4.1. Results of the Basic Analysis. Table 1 shows the statistical description of each variable. Among the 257 prefecture-level cities, an average of 1.195 bike-sharing startups were established in each city. The city with the most registered companies was Beijing, where 45 bike-sharing startups have chosen to establish their business. In the three years, the average population density was 468.215 people per square kilometer, and the per capita GDP was 65,933.55 yuan. The labor force in the tertiary industry accounted for 53.18%, and the air pollution was 49.396 per cubic meter on average, which is approaching a light pollution level. The average number of college students in each city was 192.78 per 10,000 people. With at least one registered venture capital institution, the number of cities accounted for 71.6% (184 cities). Cities where local government has issued policies to support bike sharing account for 35% of all cities, specifically 90 cities. Only 55 cities, accounting for 21.4% of the total, have issued policies to support entrepreneurial enterprises, and these are almost all among the largest major cities in China. For the public transport infrastructure in each city, there are 129 bus lines in each city on average, and there are 7.657 taxis per 10,000 people on average.

Table 1: Descriptive statistics.

Variable	Obs	Mean	Std. dev.	Min	Max
Firm	257	1.195	4.539	0	45
Density	257	468.215	346.832	5.811	2537.518
GDP per capita	257	65933.55	134000	13589.67	2160000
Labor	257	53.118	21.678	18.07	284.953
Air quality	257	49.396	15.998	15.3	94.733
Human capital	257	192.78	251.343	9.795	1283.629
Venture capital	257	0.716	0.452	0	1
Policy bike sharing	257	0.35	0.478	0	1
Policy entrepreneurship	257	0.214	0.411	0	1
Auxiliary facilities	257	129.035	191.049	5	1461
Competition facilities	257	7.657	8.558	0.388	50.465

Table 2 shows the correlation between the variables. It can be seen from the table that most variables do not have a high correlation. The lack of correlation proves some of the relationships discussed in the theory section, but there were some high correlations between the variables, which was not surprising given the reality and the nature of the variables. For example, there was a positive correlation between the number of firms and the number of auxiliary public facilities (bus routes) in the city ($r = 0.741$). Although the correlation coefficient is relatively high, this is because shared bikes are designed from the very beginning to supplement the existing public transportation in the city, as they aim to solve the "last kilometer" problem. Such a starting point makes it necessary to have a high connection between shared bikes and buses, which also extends to consumers' search for and cognition of shared bikes and buses. Subsequent regression analysis also showed statistically significant and theoretical signs. To increase the accuracy of the analysis, the multicollinearity of each variable was measured before the analysis. The analysis results show that the average VIF = 1.82, which proves no multicollinearity between the variables.

Table 2: Matrix of correlations.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Firm	1.000										
(2) Density	0.416*	1.000									
(3) GDP per capita	0.092	0.107	1.000								
(4) Labor	0.028	−0.238*	−0.052	1.000							
(5) Air quality	0.036	0.291*	0.015	−0.099	1.000						
(6) Human capital	0.275*	0.261*	0.095	−0.007	0.028	1.000					
(7) Venture capital	0.151*	0.257*	0.129*	−0.135*	0.124*	0.289*	1.000				
(8) Policy bike sharing	0.255*	0.269*	0.152*	−0.106	0.030	0.357*	0.245*	1.000			
(9) Policy entrepreneurship	0.382*	0.375*	0.085	−0.068	0.196*	0.594*	0.308*	0.253*	1.000		
(10) Auxiliary facilities	0.741*	0.528*	0.117	−0.066	0.030	0.557*	0.301*	0.360*	0.548*	1.000	
(11) Competition facilities	0.484*	0.141*	0.057	0.015	−0.110	0.548*	0.139*	0.216*	0.396*	0.513*	1.000

4.2. Negative Binomial Regression Analysis Results. Table 3 shows the negative binomial regression analysis results for venture capital, policy support, urban infrastructure, and bike-sharing startup formation in each city. To ensure consistency in the analysis results, a nested model was selected to test robustness. Model 1 provides the analysis results, including only control variables. Model 2 is the test result of Hypothesis 1, Model 3 is the test result of Hypothesis 2-1 and Hypothesis 2-2, Model 4 is the test result of Hypothesis 3-1 and Hypothesis 3-2, and Model 5 is the full model including all variables.

First, Model 1 provides only statistical results, including all control variables. Among the control variables, population density ($\beta = 0.002$, $p < 0.01$) and human capital ($\beta = 0.003$, $p < 0.01$) have a positive influence on the formation of bike-sharing startups in each city. Model 2 is a test of Hypothesis 1. According to the test results, cities with venture capital institutions are more likely to attract bike-sharing startups than cities without venture capital institutions. Thus, the presence of venture capital firms has a positive impact on the formation of bike-sharing startups ($\beta = 1.136$, $p < 0.05$), so Hypothesis 1 is supported.

The strong influence of venture capital on the formation of startups is also in line with the development of bike sharing in China. The rapid expansion of bike sharing in a short period of time is largely due to the active support of venture capital. Among the 307 startups discussed in this study, 63 (20%) were supported by venture capital funds at least once. In addition, 72% of these venture capital firms and bike-sharing startups are located in the same city, proving that venture capital firms prefer local enterprises when choosing investment target companies. To increase the probability of obtaining venture capital, bike-sharing startups prioritize starting businesses in cities with venture capital institutions as one of their development strategies.

Model 3 is the result of testing Hypotheses 2-1 and 2-2. Cities with clear policy support for bike sharing are more likely to attract bike-sharing startups than cities without such support. Although it has a positive impact when all variables are taken into account, bike-sharing policy support does not impact startup formation, so we reject Hypothesis 2-1 ($\beta = 0.397$, ns). Cities with entrepreneurial policy support are more attractive to bike-sharing startups than cities without such support, and entrepreneurial policy support positively impacts the formation of startups ($\beta = 1.506$, $p < 0.01$). Therefore, the analysis results support Hypothesis 2-2.

The impact of policy on the formation of bike-sharing startups also varies according to the type of policy. In the early days of bike-sharing development, the central government issued a series of policy documents actively promoting "green transportation" to ease traffic pressure and protect the environment, and local governments followed suit. Policies such as those attracting investment, providing government procurement opportunities, and reducing taxes have positively signaled the development of the green transportation industry, and thus bike sharing was born as a concept and a project. In the stage of rapid development for bike sharing, a series of social problems emerged, such as random bike parking and damaged or lost vehicles. Shared bikes became a new form of garbage and created traffic pressure, leading the central government to quickly issue several management policies on shared bikes to control the situation, with many cities even issuing "investment prohibition orders," which greatly affected the confidence in bike-sharing startups. Our analysis results also verify this phenomenon, which is positive when considering the influence of the bike-sharing support policy on the formation of startups alone ($\beta = 0.674$, $p < 0.05$). However, after the entry of other influencing factors, the attractiveness of this policy weakens, and it ultimately has no significant impact on the formation of startups ($\beta = 0.397$, ns).

For entrepreneurs, the entrepreneurship policies issued by the government are more attractive to them, such as those providing training courses for startup companies in business management, prioritizing business sites, and reducing taxes or offering exemptions. Meanwhile, in recent years, after the central government made it clear that talent is the number one resource and innovation is the number one driving force for China's future development, and local governments launched a symbolic "talent war." In the past, when developing the economy, most localities regarded only land, minerals, and other resources as resources, while only a few regarded "human resources" as the most valuable resources for economic development. The change in the central government's direction for development also prompted local governments to introduce very strong measures to attract all kinds of talent, including entrepreneurial and innovative talent; the introduced policies include adjustments in the hukou system for households, subsidized housing, and child prioritization in school. Both entrepreneurship policies and talent policies are more practical and specifically focused on helping new enterprises and entrepreneurs. The effects of these local policies are empirically tested in this study, which finds that they have a positive and significant impact on attracting the formation of bike-sharing startups.

Model 4 examines the impact of urban infrastructure on the formation of bike-sharing startups. In urban infrastructure, the more advanced auxiliary facilities there are, the more likely they will attract new bike-sharing startups to the city, supporting Hypothesis 3-1 ($\beta = 0.004$, $p < 0.01$). Competition facilities do not affect startup formation, so hypothesis 3-2 ($\beta = -0.003$, ns) is rejected.

The positive impact of urban infrastructure on the formation of bike-sharing startups is mainly reflected in the degree of development of auxiliary transportation facilities in the city. Bike-sharing services are mainly aimed at consumers who need to travel short distances. According to a basic survey of 20,000 bike-sharing users conducted by iiMedia Research, 50.8% of users use shared bikes for 10–30 minutes, and 36.8% use shared bikes for commuting. Although the average use price of buses is 1.33 yuan per unit of time, which makes them strongly competitive with shared bikes in the use price, the convenience of shared bikes in terms of both use route and use timing creates a competitive relationship between the two modes of transportation. Bike-sharing startups have developed strategies to supplement public transportation from their early days, such as buses or

Table 3: Negative binomial regression analysis results.

	Model 1	Model 2	Model 3	Model 4	Model 5
Density	0.002*** (4.28)	0.002*** (4.52)	0.001*** (3.60)	0.001** (2.03)	0.000 (1.29)
GDP per capita	0.000 (1.02)	0.000 (0.65)	0.000 (0.90)	0.000 (1.22)	0.000 (0.94)
Labor	0.006 (0.72)	0.007 (0.97)	0.003 (0.40)	−0.008 (−0.94)	−0.004 (−0.55)
Air quality	0.002 (0.25)	0.000 (−0.01)	−0.005 (−0.52)	0.004 (0.48)	−0.001 (−0.16)
Human capital	0.003*** (4.27)	0.003*** (4.45)	0.001** (2.19)	0.001*** (2.71)	0.000 (0.86)
Venture capital		1.136** (2.45)			0.758* (1.81)
Policy bike sharing			0.674** (2.35)		0.397 (1.55)
Policy entrepreneurship			1.506*** (4.48)		0.899*** (2.97)
Auxiliary facilities				0.004*** (5.53)	0.003*** (4.77)
Competition facilities				−0.003 (−0.20)	−0.007 (−0.42)
Constant	−2.958*** (−4.34)	−3.582*** (−5.01)	−2.288*** (−3.87)	−1.796*** (−3.04)	−2.317*** (−3.48)
N	257	257	257	257	257
Pseudo-R^2	0.143	0.153	0.181	0.210	0.236
Chi-square	88.207	94.491	111.819	129.267	145.532
Log-likelihood	−263.969	−260.827	−252.163	−243.439	−235.307

***$p < 0.01$, **$p < 0.05$, and *$p < 0.1$ (T values are in parentheses).

subways. Combined with the research results of this study, it can be once again confirmed that when choosing where to establish their business, shared transportation startups will inevitably consider the current urban traffic situation of the location, which is also determined by the service characteristics and development strategy of shared transportation.

In China, there has always been controversy about the fact that many entrepreneurs, scholars, and the media regard the taxi industry as competition for shared bikes. In some areas, taxi drivers even stole hundreds of shared bikes in the middle of the night to prevent the development of shared bike services. However, it can be seen from the research in this study that bike-sharing startups do not regard the taxi industry as a competitor, and they do not avoid entering the market of a city because there are many taxis. This result is related to the use price of shared bikes, the main use scenarios, and the use distance. From 2015 to 2020, the starting taxi fare in 36 large- and medium-sized cities in China was 9.54 yuan per taxi (Price Monitoring Center of National Development and Reform Commission of China). The use price of shared bikes is 2 yuan per hour on average, which is more advantageous for short-distance trips. At the same time, in the use scenario, shared bikes are mainly used to change vehicles at work when the traffic conditions are the most complicated and congested, and the use of shared bikes can reduce travel time more than taking a taxi. Although some scholars have verified that an increase in bike-sharing reduces bus use [47], it also reduces the use of cars, taxis, and illegal motorcycles. However, these issues are not the focus of this study. We hope to explore the influence of shared transportation industry relationships from the perspective of urban public transportation in future research.

5. Discussion

The rapid growth of shared transportation startups in China in a short period has contributed to the rise of this industry. Residents' high demand for transportation has driven the industry's market potential to exceed expectations. The industry provides a supplement to a city's existing transportation system, and it is almost free from any spatial and geographical restrictions. The shared transportation industry, among all sectors, must be considered innovative and accessible. This research aims to explore whether and why the regional environment is vital to forming new industries. We used regional data in China to analyze the regional differences influencing the formation of shared transportation startups. This study focuses on financial capital, policy, and urban infrastructure. The research results prove that regional factors have a substantial impact on the formation of startups.

With an average of 1.195 bike-sharing startups being established in each of China's 257 cities and 307 companies clustered in 75 cities, there is a severe imbalance in the startup rates among cities. We find strong evidence for the relationship between financial capital, entrepreneurial policy, urban ancillary transport facilities, and new firm formation, but the results for industrial policy and urban competitive transport facilities are surprising.

First, the development of China's venture capital industry has played a positive role in promoting China's regional economy [48], which is inseparable from the strategic development mode of venture capital institutions focusing on investment for regional startups. As Von Burg and Kenney [49] observe, venture capital promotes the emergence of area networking. Shared transportation startups seem to pursue the advantages of venture capital industry agglomeration and rely more on gaining attention and investment through geographical proximity to venture capital. The lack of venture capital in a surrounding area can discourage startups from setting up in a given area. Competition may be fiercer in regions favored by venture capital but that does not deter entrepreneurs from entering the market. From another point of view, to narrow the gap in regional development or break the imbalance, the government can also begin by reforming the regional layout of venture capital institutions. In remote cities, we can learn from the general model of government-funded venture capital to provide opportunities for more technology-based and new business model startups to obtain financial support.

Second, the window of opportunity for developing shared transportation in China comes from some social problems that need to be solved, such as traffic congestion and environmental pollution. To solve these social problems and improve conditions, the Chinese government has formulated a series of policy solutions. As Hammond [50] said, the changes in politics and hierarchy in non-Western countries such as China provide more opportunities for individual decision-making. Entrepreneurs are seizing the opportunities and advantages of policy entrepreneurship to connect problems and solutions and quickly create businesses. However, we find that public policy presents challenges in terms of shaping and promoting the entrepreneurship of new business models based on technology. Different types of policy support have diverging effects on attracting the creation of startups. Through innovative destruction, shared transportation and the sharing economy have brought rapid growth, but they also face many controversial issues. The government is trying to correct the market failure of the bike-sharing economy while regulating the industry and protecting the public interest. In the theory of public interest, the transformation of the three roles of government as protector, coordinator, and regulator [51] inhibits the formation of new ventures. The government's continued negative attitude toward the sharing economy and unclear regulatory role have dampened entrepreneurs' enthusiasm. In the future, the government can learn from the management of shared transportation. On the premise of protecting the public interest, the responsibilities and management boundaries of the government should be clarified, and solutions to the challenges brought by the development of new industries should be provided.

Third, our results partially support the relationship between urban infrastructure and entrepreneurship; in particular, they confirm Audretsch et al.'s [35] conjecture of a positive relationship between specific types of infrastructure and specific industrial contexts. However, in this study, this particular type of infrastructure is also limited to infrastructure that has auxiliary functionality for the industry. However, another interesting and fortunate finding is that competitive infrastructure has no impact on entrepreneurial activities. With the advancement of urbanization and the rapid development of digital reform, traditional urban infrastructure provides the basis for realizing the shared transportation part of the smart city concept [52]. Smart cities based on high-tech infrastructure will be the ultimate goal of future urban transformation [53]. A wealth of innovation and market opportunities triggered by emerging technologies [54], such as the internet of things [55–57], machine learning [58, 59], and deep learning [60–62], are driving the creation of new businesses. Many scholars have proposed that an increasing number of new business models have been created in this process. In the future, smart city infrastructure will be more closely related to entrepreneurship, with higher entrepreneurial activity in smart cities than in other cities [41, 63, 64]. Our results also provide some new evidence for this hypothesis.

The potential contributions of this research include the following aspects. (1) A new academic contribution of this study is its deepened understanding of the role of entrepreneurial policies and urban infrastructure at different stages or in different forms that may promote or inhibit the formation of new firms. The subdivision of the external factors affecting entrepreneurial activities expands the research framework of entrepreneurial spatial characteristics. It also enriches the literature on entrepreneurship policy and infrastructure and entrepreneurship research. (2) The results of this study are particularly valuable to entrepreneurs entering the field of shared transportation as the adoption of the shared transportation business model is globally growing. The choice of business location will affect the survival and development of enterprises. The spillover effect brought by financial capital, preferential policies, infrastructure development, and entrepreneurial opportunities in the regional environment will bring substantial benefits to the establishment of enterprises. Therefore, prospective entrepreneurs entering a new market by starting a new business should take full advantage of the potential spillover benefits in regions with active financial capital, a more inclusive political environment, and better infrastructure to increase their future competitiveness. (3) Local governments can also use this study as a theoretical reference when formulating policies related to promotion or management in the field of the sharing economy. On the one hand, the government should continue to promote policy support for entrepreneurship and innovation, especially in small- and medium-sized cities. Micropolicies should be introduced as an important means to attract new enterprises and talent. At the same time, policy should realize the importance of balancing the development of various industries in a region; integrating government, enterprise, and talent in development; and providing precise and substantive assistance to enterprises and talent. On the other hand, Samila and Sorenson [65] observe that venture capital has become a catalyst for the commercialization of new products. Because the government wants to encourage new businesses to enter a region, it must recognize the importance of funding them. It is important to not only promote the healthy development of venture capital institutions in the region but also to attract startups through policies such as simplifying and optimizing the application for government support funds or expanding the target of fund support to reduce the sole dependence of startups on venture capital.

6. Conclusions, Limitations, and Future Research Directions

This study is part of a general study on the shared transportation industry. A new discussion of the formation of the shared transportation industry from the perspectives of system, economy, society, and geographic space can help us better understand this new business model and the logic driving the development of new ventures. Although existing patterns have demonstrated the importance of regional context, our study extends the traditional types of variables used in regional venture research. The regional environment is a complex ecosystem, and the detailed differentiation of influencing factors is a neglected and not fully studied topic.

By subdividing the types of variables, we believe that our research has clarified the potential impact of regional environmental factors on the formation of industries. In addition, the improvement of China's entrepreneurial ecological environment has promoted the growth of entrepreneurial activities.

The research in this study also has some limitations. First, due to data restrictions, we cannot include other variables that form determinants for startups, such as the unemployment rate and agglomeration effects. The business model of the sharing economy is an emerging product based on the rapid development of the internet, so there has only been a short development period for this industry. Some particularities of this industry that have not been explored may limit our interpretation of the analytical results. In future research, data information will be updated, and changes in some influencing factors of the shared transportation industry will be redetermined and detected under a more rational development environment. At the same time, we also suggest that attention should be given to the internal factors affecting the establishment of enterprises through interviews or questionnaires with founders. Moreover, the development of the whole industry should be considered from more perspectives.

Second, the study involved only one country, China. The special political environment in China makes government intervention in the market or industry more efficient, and the policies issued by the central government become a framework and a source of guidance used by local governments to formulate and implement specific policies. Therefore, whether the research results of this study apply to countries under other systems and with other political environment variables must also be considered. We also hope to verify this phenomenon through scholars in other countries.

Third, as shared transportation is the most rapidly developing industry and the most accepted by the market under the sharing economy, business success in shared transportation has popularized the concept of the sharing economy. However, other startups in the sharing economy, such as shared space, shared knowledge, and other industries, are catching up. The Chinese government has paid much more attention to the transportation-sharing industry. We cannot determine whether this industrial learning will affect our results when applied to other sharing industries. In the future, a full discussion of other sharing industries and even the sharing concept itself will be necessary.

Despite some limitations, this study presents one of the first studies to explore new enterprises in the sharing economy. We believe that our research provides a [66] visual result for scholars and managers. We also hope to arouse more discussions with policymakers and managers to further promote the healthy and sustainable development of this field.

Data Availability

No new data were created or analyzed in this study. Data sharing is not applicable to this article.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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