Hometown Favoritism and Intercity Investment Networks in China

(Very preliminary and incomplete. Comments are welcome.)

Xiangyu Shi*

September 10, 2021

Abstract

In this paper, I study the effects of hometown favoritism on intercity investments in China, or more specifically, whether and how local government officials will bring more investments from their hometown to their workplace. In generalized difference-in-differences specifications, I find that the intercity investments, measured by the total paid-in capital of newly registered firms, increase by about 15%. Further evidence supports the explanation that officials reduce the information asymmetry and thus entry barriers for businesspeople in their hometown, which is incentivized by promotion prospects, rather than that officials and businesspeople form collusive and corruptive deals. Such hometown favoritism is beneficial to productivity and local development. Moreover, I structurally estimate a discrete choice model of firms' location choices, and the estimates also indicate that officials reduce the entry costs for firms from their hometown. The effects of hometown favoritism are amplified in the intercity investment networks.

JEL Classification: D22, D73, L14, P16

Keywords: hometown favoritism, investment, entry costs, network effects, China

*PhD student, Department of Economics, Yale University. Email: xiangyu.shi@yale.edu. I thank Nicholas Ryan, Xiaobo Zhang, Fabrizio Zilibotti, and participants in the seminar in Peking University for comments. I thank Shuo Liu and Xiaobo Zhang for their help with the data. This is a preliminary draft and all comments are welcome.

1 Introduction

Investment or firm creation is an important engine of economic growth (Carlin and Mayer, 2003; Walsh, 2019). Thus, it is an essential academic inquiry what the possible determinants are for investment or firm creation. In this paper, I focus on the role of hometown favoritism in shaping the investment and the creation of firms, or more specifically, whether and how intercity investments, measured by the aggregate registry capital of newly created firms, from city A to B will increase if any officials presiding city B was born in A. I further analyze the mechanisms and implications associated with the effects of the hometown favoritism on the intercity investment flows. My analysis help understand the firm dynamics which are one of the drivers of spectacular growth performance of China, the world's most populous and second largest economy. While this study is only regarding China, it nevertheless could be applied to any other related contexts.

Hometown connections are a crucial type of interpersonal relationship, and play a significant role in everyday interactions, especially between the government officials and the businesspeople. The common existence of *Tongxianghui*(hometown associations) is a prominent example for the significance of hometown connections. When the businesspeople are making investment decisions, hometown connections with local government officials might be a factor to consider. There might be two mechanisms at play. On the one hand, officials might reduce the information asymmetry for businesspeople from their hometown, for example by providing information on business opportunities, and thus lower the entry barriers for firms invested by these businesspeople. On the other hand, officials may collude with businesspeople from hometown (due to smaller collusion costs), by offering preferential treatment in exchange for monetary gains. A central task of the empirical part in this paper is to disentangle these two mechanisms.

The empirical analysis, which is the core of this paper, consists of three parts. First, I show some descriptive evidence that hometown favoritism has significant effects on intercity investment flows, and explore the underlying mechanisms and associated implications. Second, I build and estimate a discrete choice model of investment location, incorporating the effects of hometown favoritism. Third, I study the network spillover effects of intercity investment flows, and investigate the counterfactual on investment flows if hometown favoritism is everywhere.

To begin with, I gauge the impacts of hometown favoritism on intercity investments using a generalized difference-in-differences framework. In the baseline regressions, I find that if any officials in city B were born in city A, then the investment flows, measured by aggregate registry capital, by the number of newly created firms, and by a dummy indicating whether there are strictly positive investment flows, increase by about 15%, 2.1%, and 2.2%, respectively.

Then, I study the mechanisms underlying the positive correlation between hometown and intercity investments, by exploring the heterogeneity of such correlation. First, I consider the heterogeneity in firm size. The effects of officials' hometown favoritism on investments only exist for small firms, implying that collusion may not be the driver of our main results, since the benefits from collusion is relatively small for small firms. Second, I explore the heterogeneity in ownership. I only find significantly positive correlation for private firms. This evidence support the story of reducing information asymmetry and entry barriers, since the information problem is more salient for private firms. Third, I investigate the heterogeneity for different measures of entry costs. The results are four-fold: the positive effects of hometown favoritism on intercity investment flows are stronger for (1) subsample with cross-province city dyads; (2) subsample with distance larger than the median; (3) subsample with SOE share larger than the median; (4) subsample with entry barrier (calculated in Brandt et al. (2020)) larger than the median. All these results point to the explanation of reducing entry costs rather than collusion, since the effects are stronger for larger entry costs. Fourth, I test whether the effects vary with the profitability of the investment, which is measured by the number of firms in the destination city. I find that the effects are more pronounced when there are more firms in the destination city, and thus when the profitability is smaller. This result clashes with the story of collusion, since the reward of collusion is higher for investments with higher rents of profitability. In the final analysis of heterogeneity, I test the heterogeneity related to officials, trying to separate two mechanisms: (1) officials try to attract investments from their hometown to enhance local development, for a better promotion prospect; (2) officials collude with businesspeople from hometown for pecuniary rewards. I find that (1) officials attract more investments from hometown during the last term before retirement, when the promotion incentives are strongest; (2) there are no increase in the effects of hometown favoritism for officials who are caught for corruption ex post. These results indicate that officials bring investments from hometown for promotion.

I provide further evidence for the mechanisms driving the positive correlation between hometown and intercity investments. To start with, I investigate the effects of investments from hometown on officials' outcomes: promotion and corruption. Using logit regressions, I find that officials who bring a larger share of investments from hometown have better chances for promotion, further confirming the mechanism that hometown favoritism stems from promotion incentives. Moreover, using logit regressions again, I find that the share of investments from hometown does not affect the chance of being arrested for corruption. Thus, corruption motives are not the driver for hometown favoritism. Then, I investigate whether firms enjoy preferential treatment by officials from the same origin. Using land transactions as a case in point. I find that firms do not purchase lands at a lower price, nor do they purchase more lands. Thus, favor exchanges between officials and businesspeople do not explain the hometown favoritism.

In the final exercises of the descriptive empirical analysis, I explore the implications on efficiency of the hometown favoritism. First, I conduct a survival analysis of firms invested by businesspeople who may or may not come from the officials' hometown, using the Cox Hazards model. The results show that compared to firms invested by people not from any official's hometown, the firms from officials' hometown are more likely to exit market during the official's tenure, but are more likely to survive after the official's tenure. Such results imply that firms from officials' hometown are more able to adapt to the local economy in the long run. Second, I examine whether firms created by people from the officials hometown will exit market if the connected officials move to a new jurisdiction. I find that firms are even more likely to stay in the market when the officials from the same origin leave. Therefore, hometown favoritism does not lead to destruction of firms. Instead, it only leads to increasing economic activities. Third, I investigate the effects of hometown favoritism on innovation. I find that firms invested by people from officials hometown are more likely to apply for any patent. Finally, I investigate the effects of investments from officials' hometown on local development at city level. Using annual real GDP growth as the outcome variable, I find that cities with greater share of investments from the officials' hometown experience faster economic growth. This is another evidence that hometown favoritism enhance allocative efficiency.

In the next part of the empirical analysis, I build and estimate a model of firms' discrete choice of location, in the similar fashion as Berry (1994) and Berry et al. (1995). In a logit setting, and using the interaction terms of whether the lag GDP of destination city is greater than that of the origin city, and whether the officials are at the last term before retirement as the instruments, I find that a lower entry cost from city i to j, measured by the officials' hometown (whether officials in city j were born in city i), significantly raises the share of investments from i to j.

As a final exercise of the empirical analysis, I study the network spillover effects of investment flows and conduct a counterfactual analysis for the case in which hometown favoritism is ubiquitous. Using a spatial autoregressive model, and employing quasi-maximum likelihood estimation method, I find that investment flows spill positively over neighboring city dyads. Thus, the effects of hometown favoritism are amplified in the presence of the positive spillover effects.

This paper speaks to three strands of literature. First, this paper is related to the literature studying hometown favoritism or hometown connections. As a pioneer of this line of research, Hodler and Raschky (2014) find that subnational regions have more intense nighttime light when being the birth region of the current political leader. Do et al. (2017) find that native officials' promotions lead to a broad range of hometown infrastructure improvement. The same as this paper, Fisman et al. (2018), Chu et al. (2020), and Shi (2020) also focus on China. The first paper studies fellow selection of the Chinese Academies of Sciences and Engineering, and finds that hometown ties to fellow selection committee members significantly increase candidates' election probability. The second paper researches the quality of government monitoring, and finds that the quality of monitoring declines for hometown auditors. The third paper investigates the peer effects in corruption, and finds that officials are less likely to engage in corruption if their hometown connections are inspected for corruption. Fiva and Halse (2016) document that municipalities with a representative on the regional council from the same party as the regional governor tend to obtain more funding for local investments. Finally, as a study of firms, Kong et al. (2020) discover that hometown connections significantly increase access to trade credit.

Second, this paper is relevant to the research on politically connected firms. Most empirical works in this field focus on the micro-level impacts of political connections(Fisman, 2001; Khwaja and Mian, 2005; Faccio, 2006; Ferguson and Voth, 2008; Li et al., 2008; Cingano and Pinotti, 2013; Fisman and Wang, 2015), while our paper stands on a regional or a macro level and emphasize the effects on economic welfare and efficiency. Further, most of the papers measure political connections by a dummy indicating whether the firm has any member in the managerial board who used to serve in the government, whereas our paper identify political connections using the hometown ties. The existent literature has reached a consensus that political connections contribute to firms' value and performance, since they help firms obtain preferential treatment from the government. Our paper documents that firms established by businesspeople from the hometown of local officials do not receive preferential treatment, but are more productive. This paper is mostly related to Shi et al. (2018), who find that intercity investment flows increase following the interjurisdiction transfers of officials, and such increase is driven by rent-seeking. Same as this paper, I also study the interregional investments, and document the increase of investments in the presence of hometown connections, but I find that the driver of such increase is not rent-seeking, but incentives to boost local economy for better promotion prospect.

Third, this paper contributes to the incentives and behaviors of local government officials in China. In this paper, I argue that officials attract investments from hometown to promote local economy due to promotion concerns. This argument is based upon Li and Zhou (2005), Xu (2011), Yao and Zhang (2015), and Shi and Xi (2018) (and other papers) that establish the link between performance and promotion. In this paper, I find that on one hand officials with stronger promotion incentives bring more investments from hometown, and on the other officials who bring more investments from hometown have better chances of promotion. In Shi et al. (2018), I find instead that officials associated with more investments along their interregional transfers do not have better chances at promotion, but are more likely to be caught for corruption.

The remainder of this paper is organized as follows. Section 2 discusses the institutional background. Section 3 sets up a conceptual framework. Section 4 describes the data. Section 5 presents and analyzes the descriptive evidence on the relationship between hometown favoritism and investment flows. Section 6 builds and estimates a discrete choice model of firms' location. Section 7 analyzes the network spillover effects of investment flows. Section 8 concludes this paper.

2 Background

2.1 The Role of Local Officials in Development in China

As in Xu (2011), China's political institution can be characterized as a regionally decentralized authoritarian regime, which is a combination of economic decentralization and political centralization. On the one hand, the local governments are delegated with autonomous power from the central government to take charge of local affairs ranging from boosting economic growth to keeping social stability. On the other, the selection and appointment of government officials are in the control of the central government, and the promotion is partly based upon economic performance (Li and Zhou, 2005). Such institutional setting is crucial to understanding the impacts of official hometown favoritism on the spatial allocation of investment flows, which is the theme of this paper.

Since the officials of local governments are accountable for economic performance, they have a strong incentive to boost the local economy, often by increasing investments. In addition, since the local officials have power over local affairs, they can actively "attract" investments to stimulate economic growth. For reasons discussed in the next subsection, the officials are more likely to bring investments from their hometown, and firms invested by businesspeople from the hometown contribute more to the economic growth. Therefore we can derive two implications: (1) officials with stronger promotion incentive will attract more investments from hometown. (2) more investments from hometown will increase the probability of promotion for the officials. I will revisit these implications in the empirical analysis in section 4.

2.2 Hometown Favoritism in China

Hometown connections, or *laoxiang guanxi* in Chinese, play a central role in the culture of favor exchange in Chinese society. They are pervasive in Chinese social context, and lie in the heart of China's social order, economic structure, and changing institutional landscape.

Hometown ties can facilitate information flows, lower cooperation or transaction costs, and enforce contracts. First, the information asymmetry is less between individuals born in the same place, since it is easier to observe the preferences and behaviors from the same origin. In this way, the information frictions are reduced through hometown ties. Second, the smaller information asymmetry produces more trust between people sharing hometown connections, and thus it is more costless to cooperate or transact with one other. Finally, people with the same hometown always interact with one another repeatedly, and thus there is a reputation effect, which helps enforce the contract between parties: default can be punished, and in this way the optimal strategy for both parties in the contract is to comply.

In the context of Chinese political economy, the cultivation of hometown ties is part of the Chinese culture of establishing *guanxi*, or relationships of mutual obligation and favor exchange between individuals, and thus is also an essential part of the social structure in which the relationship of government and businesspeople is embedded. There is a large body of literature that examines the implications of hometown connections and also documents their roles in contemporary Chinese economy. Social organizations based on place of origin are very common, and are used to facilitate communication, strengthen personal networks and political power in the new location, and also for businesspeople to form coalitions to better compete in the market. There are often formal organizations built around hometown connections, typically called *Tongxianghui*(hometown associations).

Given the above analysis, we can posit that officials might bring more investments from hometown to their workplace for at least two reasons. On the one hand, the officials might reduce the information frictions of investments for businesspeople from their hometown. Officials can provide reliable information for businesspeople about investment opportunities and can be trusted. In this case, since the officials know the businesspeople better, the firms invested by these businesspeople will have better performance. On the other hand, officials can collude with businesspeople and form corrupt deals. They can delegate the investment project to businesspeople from their hometown, in exchange for pecuniary gains. This may happen more often between officials and businesspeople from the same origin, since the collusion costs are smaller due to hometown connections.

3 Conceptual Framework

In this section we analyze a model in which the local officials set the entry barrier for firms from their hometown or the other city differently and rationally.

To make things simple, I assume that there is one destination city, D, and two origin cities, O1 and O2. Assume that O1 is the hometown of the local leader in city D, and thus O2 is not the hometown. There is a continuum of firms of measure 1 in city O1 and O2 which decide whether or not to enter the market in city D. The firm's profit function in O1 and O2 is $\pi(z,k) = z^{1-\beta}k^{\beta} - rk - c$, where z is the productivity of the firm, k is the capital input, r is the interest rate, and c is the entry cost. Productivity of firms in O1 and O2, z, is drawn from the same distribution $F(z)$, with support $[0, \bar{z}]$. Conditional on entry, the firm's optimal level of capital in O1 and O2 is $k^*(z) = (\frac{\beta}{r})^{\frac{1}{1-\beta}} z$. The productivity cutoff above which firms choose to enter for firms in O1 is $\tilde{z}(c_{O1}) = c_{O1}[(\frac{\beta}{r})^{\frac{1}{1-\beta}} r(1/\beta - 1)]^{-1}$, and the productivity cutoff above which firms choose to enter for firms in O2 is $\tilde{z}(c_{O2}) = c_{O2}[(\frac{\beta}{r})^{\frac{1}{1-\beta}} r(1/\beta - 1)]^{-1}$.

Entry barrier c_{O1} and c_{O2} is set by the local leader in D. I assume that c_{O1} and c_{O2} can take any non-negative value: $c_{O1}, c_{O2} \in [0, +\infty)$. Therefore, the aggregate investment attracted from O1 and O2, K_{O1} and K_{O2}, are $K_{O1} = \int_{\tilde{z}(c_{O1})}^{\bar{z}} k^*_{O1}(z) dF(z)$, $K_{O2} = \int_{\tilde{z}(c_{O2})}^{\bar{z}} k^*_{O2}(z) dF(z)$.

The payoff function of the leader in city D is

$$u(c_{O1}, c_{O2}; \gamma) = \int_{\tilde{z}(c_{O1})}^{\bar{z}} h(k^*_{O1}(z)) dF(z) + E_q[\int_{\tilde{z}(c_{O2})}^{\bar{z}} h(q(z) k^*_{O2}(z)) dF(z)] - \gamma g(K_{O1} + K_{O2}),$$

where $h(\cdot)$ is a concave and strictly increasing function measuring the benefits of investment on local development, $g(\cdot)$ is a convex and strictly increasing function measuring the costs of attracting investment. $q(z) \in \{1-\Delta, 1+\Delta\}$ is a random variable with $Prob(q(z) = 1-\Delta) = Prob(q(z) = 1+\Delta) = 0.5$, and is distributed independently across z with mean 1. Δ measures the variance of q. There is uncertainty with respect to investment from the city other than the hometown, due to information asymmetry. γ is the cost shifter which is determined by the salience of promotion incentives of the leader in D. If the leader in D has high promotion incentive, then the cost of attracting investments to boost local economy is relatively unimportant.

Given the above setting, the utility maximization problem of the leader in D is: $\max_{c_{O1},c_{O2}} u(c_{O1}, c_{O2}; \gamma) = \int_{\tilde{z}(c_{O1})}^{\bar{z}} h(k^*_{O1}(z))dF(z) + E_q[\int_{\tilde{z}(c_{O2})}^{\bar{z}} h(q(z)k^*_{O2}(z))dF(z)] - \gamma g(K_{O1}+K_{O2})$, subject to $K_{O1} = \int_{\tilde{z}(c_{O1})}^{\bar{z}} k^*_{O1}(z)dF(z)$, $K_{O2} = \int_{\tilde{z}(c_{O2})}^{\bar{z}} k^*_{O2}(z)dF(z)$. Standard first order conditions with respect to c_{O1} and c_{O2} can be derived. We have the following two predictions:

Prediction 1. *The entry barrier for hometown is lower, i.e.* $c_{O1} < c_{O2}$, *due to less information asymmetry.*

Prediction 2. *City D will experience an inflow of smaller firms from O1, due to lower entry barrier.*

Prediction 3. *The entry barrier for O2 increases in* Δ, *i.e.* $\frac{\partial c_{O2}}{\partial \Delta} > 0$. *If there is more information asymmetry, then the entry barrier for O2 is higher. Thus,* $\frac{\partial K_{O2}}{\partial \Delta} < 0$.

Prediction 4. *The difference of capital inflow is larger when promotion incentives are more salient, i.e.,* $\frac{\partial (K_{O1}-K_{O2})}{\partial \gamma} < 0$.

Prediction 5. *The effects of investment on local development in city D are larger if the share of investment for firms from hometown is higher, due to lower information asymmetry.*

4 Data

I use seven data sets in the empirical analysis. To analyze the relationship between the hometown of officials and investment flows, we compile a panel data set of city dyads. I next relate the career outcomes of the officials to the investment flows attracted from the officials hometown. To answer whether the increase in the investment flows following an official with the same origin within his term will lead to greater probability of promotion, I utilize an official-term level data set, in which an official can have more than one observation (for having multiple terms). I examine whether officials bringing more investment from hometown are more likely to end up being investigated or prosecuted for corruption, using an official level data set, in which each official appears once. Moreover, I investigate whether firms will enjoy any discount under the jurisdiction of officials with the same origin, using a data set of land transactions. I further turn to investigate whether firms coming from the officials' hometown have greater survival probabilities in the market, and then explore the possibility that firms might exit the market after the officials from the same hometown are placed else, and for these two purposes we use a firm-level data set for survival analysis. Then, I test whether firms from the officials' hometown are more innovative, using a data set that merges the information of patents with firm registration. Finally, I evaluate the contributions of investment from the officials' hometown to cities' economic growth, using a city-year panel data set. All the eight data sets cover the period of 2005 - 2011.

4.1 City-dyad Data Set

My main empirical analysis are based upon a city-dyad data set, which contains variables on intercity investment flows and the hometown of officials. Each observation in the data set is a *directed* city dyad in the sense that dyad ij and ji are different. The data set does not include any city dyad made up of two identical cities, such as ii, since the investment flow for such dyad is not well-defined. The entire sample consists of 296 cities and 87320 city dyads.

4.1.1 Investment Flows

My main interest of analysis is the intercity investment flows, which are calculated using the Chinese firm registry database. This database provides registry information of all firms in China (about 20 million firms), including the location, the year of being established, the year of exit (if any), the value of registry capital[1], and the origin of the firm's legal representatives [2]. I construct three variables to measure the investment flows. First, I calculate the log aggregate registry capital

[1]The registry capital is not the firm's fixed assets. But according to Chinese Business Law, the registry capital should be proportional to the scale (and the assets) of the firm.

[2]The database displays the first six digits of legal representatives' ID number, from which we can deduce the origin of the legal representatives.

of all firms established in city j and year t that has at least one legal representative from city i. We denote this variable as log(1+Capital flows), and use it as our main dependent variable. Second, I calculate the number of firms established in city j and year t that has at least one legal representative from city i, and denote it as log(1+# of firms). Third, I generate a dummy, 1(Capital flows>0), indicating whether the investment flow is strictly positive.The descriptive statistics for the investment flows are shown in Panel A of Table A1. The mean of log(1+Capital flows) is 1.756 (the mean intercity investment flows, with no log, is 47.5 million RMB). The mean of log(1+# of firms) is 0.200 (the mean number of firms, with no log, is 4.06). Besides, 27.6% observations in the sample have strictly positive investment flows. To explore the heterogeneity by industry and ownership, I further calculate the investment flows for three different ownership types, which are state-owned, collectively-owned, and private, respectively.

4.1.2 Officials' Hometown

Our main independent variable is a dummy for officials' hometown, denoted as $Hometown_{ijt}$, indicating whether there is at least one official presiding city j in year t whose hometown is city i. To construct this variable, we collect data on personal information of city mayors, city Party Secretaries, and provincial governor, and provincial Party Secretaries for all cities and provinces from 2005 to 2011. For example, Huang Xingwei served as the city mayor of Nanyang City during 2005-2006, and he was born in Xinyang City; for this case $Hometown_{ijt}$ for "Xinyang-Nanyang" dyad during 2005-2006 equals 1. Moreover, if a provincial governor or a provincial Party Secretary in province A was born in city B, then we specify that $Hometown_{ijt} = 1$ from city B to all cities in province A, since a provincial official takes charge of all cities within the province. Finally, if an official takes multiple jobs at the same time, then we consider the job with the highest ranking. Table A1 shows that there are 1.1% dyads in the sample with $Hometown_{ijt} = 1$.

4.1.3 Officials' Characteristics

In our empirical analysis, we test whether officials having certain characteristics attract more investment flows. We are especially interested in officials' incentives for promotion and corruption.

We construct two dummy variables, 1(City official at the last term before retirement) and 1(Provincial official at the last term before retirement), to capture city and provincial officials' promotion incentives. In China, there is an age limit for mandatory retirement for Chinese local officials, beyond which the officials must leave office or at least go to unimportant job positions. For provincial officials the retirement limit is 63, and for city officials it is 58[3]. As an official ages beyond the retirement limit, the probability for him to get promoted becomes zero. Thus, in the last term before the retirement age, the officials have the strongest promotion incentives. For city officials, the last term is the age range of 54 to 58, and for provincial officials, the last term is the age range of 59 to 63.

We then generate two dummy variables, 1(City official caught for corruption) and 1(Provincial official caught for corruption), indicating whether there is at least one city or provincial official who has been caught for corruption by now. These two variables measure the incentive for rent-seeking and corruption ex post.

4.1.4 Regional Characteristics

We use cities' (log) per capita real GDP and (log) population as control variables. These data are obtained from the Chinese City Statistics Year Books from 2005 to 2011. The summary statistics of these variables are presented in Table A1.

4.2 Official-term Data Set

We also test how investment flows affect the probability of officials' promotion outcomes. Here we compile an official-term data, where each observation is a term of an official. An official can appear more than once in this data set, since in his career he can have many terms in difference places and different positions. The dependent variable in the regression to evaluate the effects of investments on promotion, which is the promotion outcome of each official i after his term j ends, is a dummy variable denoted by $1(promotion)_{ij}$. It is equal to 1 if the official is promoted. This variable is generated using information from the curriculum vitae of the officials. In our sample, and 10.3% of

[3]In China, provincial officials are mandated to retire at the age of 65, but in practice many of them have to step down or go to unimportant positions two years before retirement. We thus set 63 as the de facto retirement limit. For city officials, the retirement limit is one term (five years) earlier, and hence is 58.

the city and provincial officials get promoted after their terms. The independent variable here is the share of investments from hometown during the term of the official. The mean of this variable is 0.042 for city officials and 0.010 for provincial officials.

4.3 Official Data Set

In the empirical analysis we examine whether the investment flows are associated with the officials' probability of engaging in corruption. We compile a data set in which each observation is an official, and there are 1216 city officials and 98 provincial officials in total. The dependent variable in the regression to gauge the impacts of investments on corruption is an indicator, $corrupt_i$, denoting whether official i has been investigated, prosecuted, or penalized for corruption up till the time this paper was written. We construct this variable using data from the official web site of Commission for Discipline Inspection of the Central Committee of the CPC[4]. There are 120 out of 1216 city officials and 10 out of 98 provincial officials with $corrupt_i = 1$. The independent variable is the share of investments from hometown in all investments attracted throughout his career.

4.4 Land Transaction Data Set

In the empirical analysis, I investigate whether firms tied to officials from the same origin would buy land at a lower price, or buy more land. The data set used for this purpose is at the transaction level, obtained from the website of Ministry of Land and Resources [5], which records the information of each land transactions, including the price, quantity, purpose of usage. In the regression analysis, I use log(Unit land price) and log(Land area) as the dependent variables, and I use a dummy variable, 1(Land is purchased when official presiding i was born in j), as the main independent variable. In the sample, I keep all transactions made by firms that are established during 2005-2011.

4.5 Firm Survival Data Set

We test whether firms associated with official from the same origin enjoy higher survival rates, using a firm-level data containing approximately 1.4 million firms. The data set includes the year of

[4] All the data of the corruption cases used in our empirical analysis can be retrieved at `http://www.ccdi.gov.cn`

[5] http://www.mnr.gov.cn/

establishment and the year of exit (if applicable) for each firm. We also code when the firm's connected official holds (and leaves) office. We generate a dummy variable, $1(From\ hometown, in\ office)_i$, indicating whether firm i comes from the official's hometown and the official is still in office. Then, we construct an indicator $1(From\ hometown, out\ of\ office)_i$ denoting whether firm i comes from the hometown of an official but the official has left office. We construct these two variables to investigate whether a connected firm has different survival rates if the connected officials hold office. Hence the remaining base group is firms that are established by people not from the hometown of any official. Panel E of Table A1 shows that the proportion of these different types of firms in the sample.

Moreover, I study whether firms will exit when the officials who are from the same origin start to work elsewhere. In the regression framework similar to above, I use 1(official born in i working in other cities) as the main independent variable. Its summary statistic is presented in Panel E of Table A1.

4.6 Firm-patent data set

To evaluate the efficiency implication of hometown favoritism, I utilize the information on firms' innovation, and investigate whether firms invested by businesspeople from officials' hometown are more innovative. To measure innovation, I use a dummy variable, 1(patent application), indicating whether the firm has ever applied for any patent. Thus, I merge the data set on patent application [6] with the data set of firm registration. The share of firms that have ever applied any patent is 2.40%.

4.7 City-year Panel Data Set

I conduct an another test for the implication of the efficiency consequences of hometown favoritism. Specifically, I test whether cities with more investments from officials' hometown grow faster. In the regression, the dependent variable is the annual growth rate of real GDP, and the main independent variable is the share of investments from officials' hometown. The mean of real GDP growth rates is 15.8%, and the mean of the share of investments from officials' hometown is 0.4%.

[6] The data are obtained from National Intellectual Property Administration, `https://www.cnipa.gov.cn/index.html`

5 Descriptive Evidence

In this section I present descriptive evidence regarding the effects of hometown favoritism on intercity investment flows, and the mechanisms behind them. In I present and estimate a structural model of hometown favoritism and firm location choice in Section 5.

5.1 Baseline Results

The main descriptive data analysis focus on the relationship between the hometown favoritism of cities' and provinces' government officials and dyadic intercity investment flows. The econometric specification is a generalized difference-in-differences setting of the following form:

$$y_{ijt} = \alpha \ Hometown_{ijt} + X_{ijt}\beta + \lambda_{ij} + \gamma_t + \delta_t \times \eta_{ij} + u_{ijt}, \tag{1}$$

where the dependent variable, y_{ijt}, is one of the three variables: log of firm registry capital of intercity investment, log of number of firms created, and a dummy variable of whether there is strictly positive investment flow, from city i to city j in year t. The main independent variable, $Hometown_{ijt}$, is a indicator variable equal to 1 if the city party secretary, city mayor, provincial governor, or provincial party secretary presiding in city j at year t was born in city i. So α is the main parameter of interest. X_{ijt} is a vector of control variables including log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. λ_{ij} is the city-dyad fixed effects, γ_t is the year fixed effects, and $\delta_t \times \eta_{ij}$ is the region-specific political cycle, which is the interactions between dummies for the year in the political cycles and dummies for origin city and destination city's regions respectively[7]. u_{ijt} is the error term. In the baseline specification, I cluster the standard errors at the city-dyad level.

Table 1 presents the results for this baseline specification. In columns (1) through (3), the

[7]There are six region dummies: Huabei, Dongbei, Dongnan, Huanan, Xinan, Xibei.

dependent variable is log(1+Capital flows), and the coefficients on $Hometown_{ijt}$ are positive and statistically significant, all at 1 percent level. The magnitude of the coefficients are about 0.15, implying that if officials in city j is born in city i, the investment flows measured by firm registry capital from city i to j increase about 15%. In columns (4) through (6) where the dependent variable is log(1+# of firms), and in columns (7) through (9) where the dependent variable is 1(Investment flows>0), the coefficients on $Hometown_{ijt}$ are all positive and statistically significant, at least at 5 percent level.

There might be concerns that pre-existing unobserved trends might be responsible for our baseline results. In light of this, we use a more flexible specification to allow the effects of the hometown favoritism vary with time. Consider the following specification:

$$y_{ijt} = \sum_{\tau, \tau \neq -1} \alpha_\tau \ Hometown_{ijt} \times \rho_{ij,t+\tau} + X_{ijt}\beta + \lambda_{ij} + \gamma_t + u_{ijt} \tag{2}$$

Equation (2) is similar to the baseline specification, with the only exception that the dummy for the transfers, $Hometown_{ijt}$, is replaced by the interaction terms $Hometown_{ijt} \times \rho_{ij,t+\tau}$. $\rho_{ij,t+\tau}$ is the dummy indicating whether it is τ years after (if positive) or before (if negative) the official in j was born in i at year t. We set the year just prior to the transfer as the base group. α_τ captures the dynamic effects of the hometown favoritism.

If the correlation between the incidence of the transfers and investment flows is not caused by pre-existing trends, then we should expect that α_τ is not positive and statistically significant when $\tau < 0$. We run the above specification, and plot the coefficients for $-3 \leq \tau \leq 2$, $\tau \leq -4$, and $\tau \geq 3$, for log(1+Capital flows), log(1+# of firms), and 1(Investment flows>0), in Figure A1, Figure A2, and Figure A3, respectively. In all three cases, the coefficients for negative τ is very close to zero, and statistically insignificant. On the contrary, the coefficients positive τ are mostly positive and significant. Thus we rule out the possibility that unobserved pretrends are the main driver of our baseline results.

In addition, I conduct a falsification test for robustness of the baseline results. In the regression, I use the inverse of $Hometown_{ijt}$, or $Hometown_{jit}$, as the independent variable. This setting tests

Table 1: Baseline results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	log(1+Capital flows)			log(1+# of firms)			1(Investment flows>0)		
1(Official in j born in i)	0.152***	0.152***	0.142***	0.0214***	0.0209***	0.0171**	0.0222***	0.0222***	0.0203***
	(0.0487)	(0.0486)	(0.0483)	(0.00687)	(0.00686)	(0.00669)	(0.00762)	(0.00761)	(0.00760)
Controls	N	Y	Y	N	Y	Y	N	Y	Y
Dyad FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Regional Political Cycles	N	N	Y	N	N	Y	N	N	Y
Observations	611240	611240	611240	611240	611240	611240	611240	611240	611240
R-squared	0.029	0.029	0.033	0.024	0.025	0.036	0.019	0.019	0.022
Number of City Dyads	87320	87320	87320	87320	87320	87320	87320	87320	87320

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

whether officials bring investments *to* their hometown. Results are given by Table A3, which indicate that this is not the case. Thus, favoritism only applies to firms in officials' hometown.

5.2 Heterogeneity

Next, I explore the heterogeneity in the effects of hometown favoritism on intercity investment flows, so as to figure out the mechanism driving such positive effects. First, I consider the heterogeneity in firm size. I use the same specification as (1), but change the dependent variable into log(1+# of firms, small), log(1+# of firms, medium), and log(1+# of firms, large)[8]. The results are shown in Table 2. Only the coefficient on $Hometown_{ijt}$ for log(1+# of firms, small) is positive and statistically significant, and its magnitude is much larger than those for the dependent variables log(1+# of firms, medium) and log(1+# of firms, large). Therefore, the results imply that collusion might not be the mechanism driving the positive correlation between hometown and investment flows, since the benefits of collusion is large for larger firms, but the effect on larger firms is small and insignificant. Instead, it is possible that the officials might reduce the information asymmetry and thus entry barriers for firms in the hometown.

Second, I explore the heterogeneity in ownership. I rerun the baseline specification (1) and replace the dependent variable to one of the three following variables: log(1+Capital flows, state owned), log(1+Capital flows, collective), and log(1+Capital flows, private). The results are shown in Table 3. Only the coefficient for log(1+Capital flows, private) is positive and statistically significant. This evidence support the story of reducing information asymmetry and entry barriers, since the information problem is more salient for private firms.

The above evidence points to the story of reducing information asymmetry and entry barriers to explain the positive effect of hometown favoritism on intercity investment flows. The next step is to further explore such mechanism. As a third exercise to test the heterogeneity, I investigate the heterogeneity of entry costs. First, I divide the total sample into two subsample: cross-province and within-province city-dyad subsamples, and run the baseline specification separately. Due to mobility

[8]Here small firms are those whose registry capital is smaller than 1000 thousand RMB, medium firms are those whose registry capital is between 1000 and 10000 thousand RMB, and large firms are those whose registry capital is greater than 10000 thousand RMB.

Table 2: Heterogeneity: firm size

	(1)	(2)	(3)
	log(1+# of firms, small)	log(1+# of firms, medium)	log(1+# of firms, large)
1(Official in j born in i)	0.0189***	0.00418	0.000527
	(0.00679)	(0.00308)	(0.00122)
Controls	Y	Y	Y
Dyad FE	Y	Y	Y
Year FE	Y	Y	Y
Regional Political Cycles	N	N	N
Observations	611240	611240	611240
R-squared	0.024	0.002	0.000
Number of City Dyads	87320	87320	87320

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

Table 3: Heterogeneity: ownership

	(1)	(2)	(3)
	log(1+Capital flows, state owned)	log(1+Capital flows, collective)	log(1+Capital flows, private)
1(Official in j born in i)	0.00413	-0.00248	0.144***
	(0.0154)	(0.0144)	(0.0475)
Controls	Y	Y	Y
Dyad FE	Y	Y	Y
Year FE	Y	Y	Y
Regional Political Cycles	N	N	N
Observations	611240	611240	611240
R-squared	0.000	0.002	0.032
Number of City Dyads	87320	87320	87320

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

restrictions and local protectionism, the entry costs for cross-province city dyads are larger. Thus, if hometown favoritism lowers entry costs for investments, the effects should be more significant for city-dyads with greater entry barriers. Table 4 shows that this is just the case. The coefficients on $Hometown_{ijt}$ in columns (1) through (3) are larger and statistically more significant than their counterparts in columns (4) through (6), supporting the explanation of reducing the entry costs.

Second, I divide the total sample into two subsamples according to whether the distance of the city dyad is larger than sample median. It is obvious that the city dyads with longer distance have more information asymmetry and thus entry costs. Thus if the role of hometown favoritism is to reduce such information asymmetry and entry costs, the effects should be larger for city dyads with longer distance. Table 5 shows that it is just the case. In columns (1) through (3), for the subsample of distance greater than sample median and for all the three dependent variables, the coefficients on $Hometown_{ijt}$ are larger.

Third, I investigate the heterogeneity in the capital share of state-owned enterprises (SOEs) in the destination cities. Brandt et al. (2020) point out that in regions with higher SOE share, the entry cost is larger. Thus, if the officials reduce entry barriers for firms from their hometown, we will expect that the effects of hometown are larger for the subsample with greater SOE share in the destination cities. In light of this, I divide the total sample into two subsamples according to the SOE share in the destination cities. Table 6 presents the results. In columns (1) through (3), where the SOE share of the subsample is greater than the sample median, the coefficients on $Hometown_{ijt}$ are larger and more statistically significant. Thus the results are consistent with our explanation.

Finally, I directly investigate the heterogeneity of entry barriers in the destination provinces calculated by Brandt et al. (2020). I divide the total sample into two subsample according to the entry barriers, in the same way as above. Table 7 presents the results. Only the coefficients for the subsample with entry barrier$\geq$sample median are positive and statistically significant. Such evidence, again, supports the mechanism that officials reduce the entry barriers for firms in their hometown.

The above heterogeneity analysis illustrates that the positive effects of hometown favoritism on intercity investment flows are driven by the fact that government officials might reduce the information

Table 4: Heterogeneity: cross- and within-province subsample

	(1)	(2)	(3)	(4)	(5)	(6)
	log(1+Capital)	log(1+# of firms)	1(Capital flows>0)	log(1+Capital)	log(1+# of firms)	1(Capital flows>0)
	Cross-province sample			Within-province sample		
1(Official in j born in i)	0.152***	0.0209***	0.0222***	0.0969	-0.00521	0.00782
	(0.0486)	(0.00686)	(0.00761)	(0.0620)	(0.0119)	(0.00951)
Controls	Y	Y	Y	Y	Y	Y
Dyad FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Regional Political Cycles	N	N	N	N	N	N
Observations	586880	586880	586880	24360	24360	24360
R-squared	0.029	0.025	0.019	0.102	0.126	0.032
Number of City Dyads	83840	83840	83840	3480	3480	3480

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

Table 5: Heterogeneity: distance between cities

	(1)	(2)	(3)	(4)	(5)	(6)
	log(1+Capital)	log(1+# of firms)	1(Capital flows>0)	log(1+Capital)	log(1+# of firms)	1(Capital flows>0)
		Distance>sample median			Distance≤sample median	
1(Official in j born in i)	0.158**	0.0349***	0.0285**	0.112**	0.00447	0.0139**
	(0.0743)	(0.0108)	(0.00761)	(0.0466)	(0.00731)	(0.00702)
Controls	Y	Y	Y	Y	Y	Y
Dyad FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Regional Political Cycles	N	N	N	N	N	N
Observations	305963	305963	305963	305438	305438	305438
R-squared	0.019	0.018	0.014	0.044	0.039	0.026
Number of City Dyads	43709	43709	43709	43634	43634	43634

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

Table 6: Heterogeneity: SOE share in the destination cities

	(1)	(2)	(3)	(4)	(5)	(6)
	log(1+Capital)	log(1+# of firms)	1(Capital flows>0)	log(1+Capital)	log(1+# of firms)	1(Capital flows>0)
	SOE share≥sample median			SOE share<sample median		
1(Official in j born in i)	0.172***	0.0202**	0.0177**	0.0953	-0.000414	0.0112
	(0.0581)	(0.00862)	(0.00904)	(0.0579)	(0.00884)	(0.00863)
Controls	Y	Y	Y	Y	Y	Y
Dyad FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Regional Political Cycles	N	N	N	N	N	N
Observations	305030	305030	305030	330400	330400	330400
R-squared	0.034	0.027	0.020	0.024	0.026	0.016
Number of City Dyads	55640	55640	55640	47200	47200	47200

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

Table 7: Heterogeneity: entry barriers in the destination provinces

	(1)	(2)	(3)	(4)	(5)	(6)
	log(1+Capital)	log(1+# of firms)	1(Capital flows>0)	log(1+Capital)	log(1+# of firms)	1(Capital flows>0)
	Entry barrier≥sample median			Entry barrier<sample median		
1(Official in j born in i)	0.249***	0.0214**	0.0324***	0.0586	0.00694	0.00640
	(0.0584)	(0.00973)	(0.00901)	(0.0543)	(0.00775)	(0.00816)
Controls	Y	Y	Y	Y	Y	Y
Dyad FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Regional Political Cycles	N	N	N	N	N	N
Observations	280840	280840	280840	330400	330400	330400
R-squared	0.036	0.034	0.020	0.027	0.023	0.020
Number of City Dyads	40120	40120	40120	47200	47200	47200

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

asymmetry and thus entry barriers for businesspeople in their hometown, rather than that officials collude with the businesspeople from their hometown. Now I confirm this story with a test from a different angle. If collusion is the main driver of the positive correlation, then we will expect that firms with high rent, or high profitability, will be more likely to invest in the jurisdiction of the officials with whom they collude. To test this hypothesis, I interact the hometown dummy variable with the number of firms in the destination city, which is negatively related with profitability of investment (Berry, 1992). If such hypothesis is true, then we will expect that the coefficient on the interaction term should be negative. Table 8 shows the results. In columns (1) through (3), for all the three dependent variables, the coefficients on the interaction term are positive and statistically significant, thus refuting the hypothesis. Instead, the results support the explanation of reduced entry costs, since less profitable investments from the officials hometown increase, indicating that the entry costs must drop.

Next, I test the heterogeneity related to officials, trying to separate two mechanisms: (1) officials try to attract investments from their hometown to enhance local development, for a better promotion prospect; (2) officials collude with businesspeople from hometown for pecuniary rewards. First, consider the promotion incentives. Local officials have mandatory retirement age, and generally they have to step down and lose power two years before the retirement age. As a result, their promotion incentives are strongest at the last term before the retirement age: for city officials, the age interval for the last term is 54 to 58, and for provincial officials, the age interval is 59 to 63. To have a better chance of promotion, the officials might make efforts to attract investments to boost the local economy (Li and Zhou, 2005). To test this, I interact the hometown dummy with two dummies indicating whether at least one city official or one provincial official is at the final term before retirement, respectively. Table 9 presents the results. While the coefficients on the interaction term of $Hometown_{ijt}$ and 1(City official at the last term before retirement) is insignificant, in columns (2) and (3), the coefficients on the interaction term of $Hometown_{ijt}$ and 1(Provincial official at the last term before retirement) are positive and statistically significant. This is thus suggestive evidence that officials attract investments from hometown for promotion.

Table 8: Heterogeneity: profitability in the destination cities

	(1)	(2)	(3)
	log(1+Capital flows)	log(1+# of firms)	1(Capital flows>0)
1(Official in j born in i)	-0.285**	-0.0513**	-0.0200
	(0.140)	(0.0206)	(0.0211)
lag log(number of firms/population)	-0.101***	-0.00331*	0.00771***
	(0.0141)	(0.00199)	(0.00227)
1(Official in j born in i)*lag log(number of firms/population)	0.104***	0.0171***	0.0100**
	(0.0327)	(0.00515)	(0.00482)
Controls	Y	Y	Y
Dyad FE	Y	Y	Y
Year FE	Y	Y	Y
Regional Political Cycles	N	N	N
Observations	611240	611240	611240
R-squared	0.029	0.025	0.019
Number of City Dyads	87320	87320	87320

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

Table 9: Age and promotion incentives

	(1)	(2)	(3)
	log(1+Capital flows)	log(1+# of firms)	1(Capital flows>0)
1(Official in j born in i)	0.118***	0.00722	0.0133*
	(0.0445)	(0.00672)	(0.00685)
1(Official in j born in i)*1(City official at the last term before retirement)	0.125	-0.00466	0.00131
	(0.0872)	(0.0146)	(0.0126)
1(Official in j born in i)*1(Provincial official at the last term before retirement)	0.0468	0.0258**	0.0174*
	(0.0672)	(0.0106)	(0.0100)
Controls	Y	Y	Y
Dyad FE	Y	Y	Y
Year FE	Y	Y	Y
Regional Political Cycles	N	N	N
Observations	611240	611240	611240
R-squared	0.031	0.028	0.020
Number of City Dyads	87320	87320	87320

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

Second, I test whether the officials and the businesspeople from their hometown collude corruptively. Since the collusion between businesspeople and officials is hard to observe, I use a dummy variable indicating whether the official has been caught for corruption as a crude measure for collusion. In the regression, I interact $Hometown_{ijt}$ with two dummies indicating whether at least one city official and one provincial official has been caught for corruption, respectively. Table 10 shows the results. Nearly all coefficients on the interaction terms are not significant, except that in column (2) the coefficient on the interaction of hometown dummy and 1(Provincial official caught for corruption) is negative and significant. Therefore, such results do not support the hypothesis that officials collude with businesspeople from their hometown for monetary gains.

5.3 Further Evidence for the Mechanisms

In this subsection, I provide further evidence for the mechanisms driving the positive correlation between hometown and intercity investments. To begin with, I investigate the effects of investments from hometown on officials' outcomes: promotion and corruption. To evaluate the effects on promotion, I use the official-term data set which contains information on the share of investments from hometown during the term, and the promotion outcome at the end of the term. I run a logistic regression where the main independent variable is the share of investments from hometown. The results are presented in Table 11. In columns (1) through (6), for both city officials and provincial officials, the coefficients on the share of investments from hometown are all positive and significant. Thus, investments from hometown contribute to the officials' promotion prospects, and this explains why officials are willing to attract investments from their hometown.

Then, I evaluate the effects of investments from hometown on the probability of being caught for corruption, using logit regressions and official-level data set. Each observation of the data set contains information regarding whether the official has been caught for corruption and the share of investments from hometown in the official's entire career. Table 12 shows the results of logit regressions, which indicate that investments from hometown has nothing to do with corruption. Such results again imply that officials does not attract investments from hometown for corruption.

Table 10: Rent-seeking incentives: caught for corruption

	(1)	(2)	(3)
	log(1+Capital flows)	log(1+# of firms)	1(Capital flows>0)
1(Official in j born in i)	0.143***	0.0146**	0.0178***
	(0.0428)	(0.00651)	(0.00650)
1(Official in j born in i)*1(City official caught for corruption)	0.0909	0.00301	0.00482
	(0.140)	(0.0225)	(0.0201)
1(Official in j born in i)*1(Provincial official caught for corruption)	-0.109	-0.0284*	-0.00382
	(0.133)	(0.0171)	(0.0212)
Controls	Y	Y	Y
Dyad FE	Y	Y	Y
Year FE	Y	Y	Y
Regional Political Cycles	N	N	N
Observations	611240	611240	611240
R-squared	0.031	0.028	0.020
Number of City Dyads	87320	87320	87320

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

Table 11: Investment from hometown and promotion

	(1)	(2)	(3)	(4)	(5)	(6)
	Logistic Regressions 1(Promotion)					
	City officials			Provincial officials		
share of investments from hometown	0.837**	0.866**	1.228***	8.503**	7.164***	9.148**
	(0.337)	(0.348)	(0.493)	(3.405)	(2.157)	(3.632)
Control Variables	Y	Y	Y	Y	Y	Y
Provincial Dummies	N	N	N	N	N	Y
Year Dummies	N	Y	Y	N	Y	Y
City Dummies	N	N	Y	N	N	N
Observations	3425	3425	2797	399	399	337

Notes: The city-official sample covers 3425 observations of city-year units from 2005 to 2011. The province-official sample covers 399 observations of province-year units from 2005 to 2011. Controls include log(1+total investment), age, ethnicity dummies, education attainment dummies, and gender.
* Significant at 10%, ** 5%, *** 1%.

Table 12: Investment from hometown and corruption

	(1)	(2)
	Logistic Regressions	
	1(Caught for corruption)	
	City officials	Provincial officials
share of investments from hometown	-0.797	-427.8
	(0.758)	(425.9)
Control Variables	Y	Y
Observations	1216	98

Notes: The city-official sample covers 1216 officials. The province-official sample covers 98 officials. Controls include log(1+total investment), age, ethnicity dummies, education attainment dummies, and gender. * Significant at 10%, ** 5%, *** 1%.

Next, I turn to evaluate the potential benefits that firms may gain from being connected to officials from the same origin. I focus on Chinese land market, using land transaction data which records the price and quantity in each transaction. I regress the log(Unit land price) and log(Land area) in city j on a indicator variable, 1(Land is purchased when official presiding j was born in i), where i is the origin of the firm that makes the transaction. Results in Table 13 indicate that firms do not purchase lands at lower prices nor purchase more land. Thus firms do not enjoy discount from the officials sharing the same origin. Such results do not support that businesspeople from officials' hometown make collusive deals that are reciprocal. This is contrary to Chen and Kung (2019), who find that politically connected firms enjoy a large discount in land purchase.

Table 13: Land price and area

	(1)	(2)	(3)	(4)
	log(Unit land price)		log(Land area)	
1(Land is purchased when official presiding j was born in i)	-0.0319	-0.0310	-0.004	-0.004
	(0.033)	(0.033)	(0.015)	(0.015)
log(capital)		-0.003		-0.002
		(0.003)		(0.001)
log(Land area)		0.158***		
		(0.008)		
Usage dummies	Y	Y	Y	Y
Transaction year-month dummies	Y	Y	Y	Y
City dummies	Y	Y	Y	Y
Industry dummies	N	Y	N	Y
Observations	115179	115176	115180	115177
R-squared	0.082	0.087	0.181	0.181

Notes: The sample covers 115180 land transactions from 2005 to 2011. * Significant at 10%, ** 5%, *** 1%.

5.4 Evaluation of the Efficiency

In this subsection, I investigate the implications of hometown favoritism on efficiency. First, I conduct a survival analysis of firms invested by businesspeople who may or may not come from the officials' hometown, using the Cox Hazards model. The independent variables are two dummy variables, 1(From hometown, in office) and 1(From hometown, out of office), which indicate whether the businesspeople are from the official's hometown and the official is in office or out of office. Table 14 delivers the results of the Cox regressions. To avoid computational issues, I use a random one-tenth subsample for the empirical analysis. In columns (1) through (4), the coefficients on 1(From hometown, in office) are positive and significant, and the coefficients on 1(From hometown, out of office) are negative and significant. Such results imply that the firms from officials' hometown are more likely to exit market during the official's tenure, but are more likely to survive after the official's tenure. Thus, officials do not provide protection for businesspeople from their hometown. Moreover, the firms that survive the officials' tenure are ones that have better performance and adapt better to the local economy.

Table 14: Survival analysis 1

	(1)	(2)	(3)	(4)
	Cox Hazard Rate			
1(From hometown, in office)	1.723***	1.398***	1.389***	1.274***
	(0.00476)	(0.00501	(0.00508)	(0.00572)
1(From hometown, out of office)	-0.744***	-0.686***	-0.683***	-0.715***
	(0.000715)	(0.000719)	(0.000719)	(0.000742)
Control variables	N	Y	Y	Y
Industry dummies	N	N	Y	Y
Provincial dummies	N	N	N	Y
Observations	1406876	1406876	1406224	1406224

Notes: The sample covers 1406876 observations (firm-period unit) for firms that were established during 2005-2011. To avoid computational issues, I use a random one-tenth subsample for the empirical analysis. Controls include log(registration capital), and ownership type dummies. * Significant at 10%, ** 5%, *** 1%.

Second, I examine whether firms created by people from the officials' hometown will exit market if the connected officials move to a new jurisdiction. To do so, I conduct again a survival analysis in which the dummy variable, 1(Official born in i working in other cities), is the main independent variable. The coefficient on the independent variable captures the change in probability of firm exit when the officials from the same origin start working in other cities. Table 15 presents the results. In columns (1) through (4), the coefficients on 1(Official born in i working in other cities) are negative and statistically significant. Such results imply that firms are even more likely to stay in the market when the officials from the same origin leave. Therefore, hometown favoritism does not lead to destruction of firms. Instead, it only leads to increasing economic activities.

Table 15: Survival analysis 2

	(1)	(2)	(3)	(4)
	Cox Hazard Rate			
1(Official born in i working in other cities)	-0.367***	-0.309***	-0.311***	-0.245***
	(0.00646)	(0.00657)	(0.00659)	(0.00672)
Control variables	N	Y	Y	Y
Industry dummies	N	N	Y	Y
Provincial dummies	N	N	N	Y
Observations	1187900	1187900	1187284	1187284

Notes: The sample covers 1187900 firms for the period of 2005-2011. To avoid computational issues, I use a random one-tenth subsample for the empirical analysis. * Significant at 10%, ** 5%, *** 1%.

Third, I investigate the effects of hometown favoritism on innovation, which partly reflects productivity (Aw et al., 2008; König et al., 2020). To measure innovation, I use a dummy variable, 1(Apply for patent), indicating whether the firm has ever applied for any patent. To establish the relationship between hometown favoritism and innovation, I use a firm-level data set that has information on patent application; I regress the dummy variable, 1(Apply for patent), on another dummy variable, 1(Established when official in j born in i). The results are shown in Table 16. Nearly all coefficients on the main independent variable are positive and statistically significant. Such results indicating that firms invested by people from officials' hometown are more innovative. This could be another evidence that hometown favoritism is beneficial for productivity.

As the final empirical exercise of this subsection, I investigate the effects of investments from officials' hometown on local development. To this end, I estimate a growth equation where the left hand side variable is annual real GDP growth, while the right hand side variables are the share of investments from hometown, controls, and various fixed effects. The results are presented in Table 17. In both columns (1) and (2), the coefficients on the share of investments from hometown are positive

Table 16: The effects on patent applications

	(1)	(2)	(3)	(4)	(5)
	1(Apply for patent)				
1(Established when official in j born in i)	0.000875*	0.00159***	0.00156***	0.00159***	0.000280
	(0.000483)	(0.000476)	(0.000468)	(0.000469)	(0.000491)
Control Variables	N	Y	Y	Y	Y
Industry dummies	N	N	Y	Y	Y
Year of establishment dummies	N	N	N	Y	Y
Province dummies	N	N	N	N	Y
Observations	910419	910419	910258	910258	910258
R-squared	0.000	0.030	0.062	0.062	0.064

Notes: The sample covers 910419 firms established during the period of 2005-2011. Control variables include log(registry capital) and ownership dummies. * Significant at 10%, ** 5%, *** 1%.

and statistically significant, indicating that hometown favoritism is good for the growth of the local economy.

Table 17: The effects on GDP growth

	(1)	(2)
	GDP growth	
share of investments from hometown	0.00135***	0.00114***
	(0.000216)	(0.000205)
Control Variables	N	Y
Year Dummies	Y	Y
City Dummies	Y	Y
Observations	2072	2072
R-squared	0.165	0.293
Number of Firms	296	296

Notes: The sample covers 296 cities from 2005 to 2011. Control variables include the log total capital of firm entry, and log population. * Significant at 10%, ** 5%, *** 1%.

6 BLP Estimation of Firms' Discrete Location Choice Model

In this section, I build and estimate firms' discrete location choice model in a way similar to Berry (1994) and Berry et al. (1995).

Suppose there are $J = \{1, 2, ..., j\}$ cities which could be the destination of investments. The profit for firm o (from city i) to invest in city j in year t is $\pi_{oijt} = X_{it}\beta + Z_{jt}\gamma - \lambda\phi_{ijt} + \zeta_{it} + \zeta_{jt} + \epsilon_{oijt}$, where X_{it} is the vector of observed characteristics of city i and year t, Z_{jt} is the vector of observed characteristics of city j and year t, ϕ_{ijt} is the entry cost from city i to enter city j in year t (which can be proxied by whether any official presiding city j in year t was born in i). ζ_{it} is the unobserved characteristics of city i in year t, ζ_{jt} is the unobserved characteristics of city j in year t. ϵ_{oijt} is the unobserved random factor with mean zero that affects the profit. The profit for firm o from city i to invest in city i is normalized to 0. Given the above setting, the mean profit could be written as $\delta_{ijt} = X_{it}\beta + Z_{jt}\gamma - \lambda\phi_{ijt} + \zeta_{it} + \zeta_{jt}$.

Firm o will invest in city j if for any $k \neq j$, $k \in J$, $\pi_{oijt} > \pi_{oikt}$. This implicitly defines the set of unobserved parameters ϵ_{oijt} that result in investments in j as $A_{ijt}(\delta) = \{\epsilon_{oijt} : \epsilon_{oijt} + \delta_{ijt} > \epsilon_{oikt} + \delta_{ikt}, \forall k \neq j\}$. The share of investments in j is thus the probability that ϵ_{oit} falls in $A_{ijt}(\delta)$. Given a distribution function $F(\epsilon)$, and its density $f(\epsilon)$, the share of investments from city i in j is $s_{ijt}(\delta) = \int_{A_{ijt}(\delta)} f(\epsilon) d\epsilon$.

Assume that ϵ_{oijt} is distributed identically and independently across firms and destination cities with the extreme value distribution function $f(\epsilon) = \exp(-\exp(-\epsilon))$. The share of investments from city i in j is given by the logit formula $s_{ijt}(\delta) = \frac{\exp(\delta_{ijt})}{\sum_{k=1}^{j} \exp(\delta_{ikt})}$. Taking log yields

$$\ln(s_{ijt}) - \ln(s_{iit}) = \delta_{ijt} = X_{it}\beta + Z_{jt}\gamma - \lambda\phi_{ijt} + \zeta_{it} + \zeta_{jt}. \tag{3}$$

Define $\xi_{ijt}(\beta, \gamma, \lambda) = \ln(s_{ijt}) - \ln(s_{i0t}) - X_{it}\beta - Z_{jt}\gamma + \lambda\phi_{ijt}$. Let W be the vector of instrumental variables, which could be the exogenous characteristics of the officials, like age, and the economic fundamentals, like the difference of GDP in the city dyad. In section 4 I document that the officials' promotion incentives are the main driver of the effects of hometown favoritism. Moreover, the GDP level is one of the economic fundamentals that shapes the incentives of investment. Therefore, here I use two interaction terms as the instruments: the interaction of a dummy indicating whether the lag per capita GDP of destination city is greater than that of the origin city, and a dummy indicating whether at least a city official presiding city j is at the last term before retirement, and the interaction of the former dummy and a dummy indicating whether at least a provincial official presiding city j is at the last term before retirement. The moment condition is thus $E[W'_{ijt}\xi_{ijt}(\beta, \gamma, \lambda)] = 0$.

The estimation results are given by Table 18. In columns (1) and (2), I employ OLS to estimate the equation (3), the coefficients on the term representing the entry costs, $Hometown_{jit}$, are positive and statistically significant. In columns (3) and (4), I use IV-GMM for estimation, and the coefficients on $Hometown_{jit}$ become larger, and are still positive and statistically significant. The Kleibergen-Paap rk Wald F statistics indicate that there is no problem of weak instruments, and the Hansen J statistics imply that there is no problem of overidentification.

Table 18: Aggregate logit model estimation

	(1)	(2)	(3)	(4)
	$\log(s_{ijt}) - \log(s_{iit})$			
	OLS		GMM	
1(Official in j born in i)	0.0137**	0.0133**	0.0341***	0.0342***
	(0.00564)	(0.00563)	(0.0101)	(0.0101)
Controls	N	Y	N	Y
Dyad FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y
Observations	611240	611240	611240	611240
R-squared	0.063	0.066	0.063	0.064
Number of City Dyads	87320	87320	87320	87320
Kleibergen-Paap rk Wald F statistic			2131	2978
Hansen J statistic			1.698	1.696

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. In columns (3) and (4), the instruments are the interactions of a dummy indicating whether the lag GDP of destination city is greater than that of the origin city, and two dummy variables equal to 1 if the city officials (city mayor and party secretary) or provincial officials (provincial governor and party secretary) are at the last term before the final chance of promotion. * Significant at 10%, ** 5%, *** 1%.

I then use the same IV strategy to estimate the baseline specification, and the results are delivered in Table A2. The coefficients on $Hometown_{jit}$ are qualitatively similar to those in Table 1, except that in IV-GMM regressions the coefficients are moderately inflated.

7 Network Effects in Investment Flows

The analysis above does not consider the interconnectedness of investment flows in the network: the investment flows from city i to j may also affect the flows of neighboring cities due to spillover. In this section, I study the network spillover effects of investment flows in the network. I employ the quasi-maximum likelihood (QML) estimation proposed by Lee and Yu (2010) to evaluate the network spillover effects of intercity investment flows.

Incorporating such spillover effects, the data generating process of the investment flows from city i to j in year t, y_{ijt}, is as follows:

$$y_{ijt} = \rho \sum_{i'j' \in N_{ij}} w_{i'j'ij} y_{i'j't} + X_{ijt}\beta + \lambda_t + \delta_{ij} + u_{ijt}. \tag{4}$$

N_{ij} is the "neighborhood" of city dyad ij. It could be city dyads that share the same origin or destination as ij. $w_{i'j'ij}$ is the spatial weight for $y_{i'j't}$ in the neighborhood of ij. In the regression, we take $w_{i'j'ij} = \frac{1}{||N_{ij}||}$, so $\sum_{i'j' \in N_{ij}} w_{i'j'ij} y_{i'j't}$ is simply the arithmetic average of y in ij's neighborhood. X_{ijt} is the vector of controls which include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. λ_t is the year fixed effects. δ_{ij} is the city dyad fixed effects.

Specification (4) is also called a spatial autoregressive (SAR) model. ρ is the main coefficient of interests, which capture the network spillover effects of investment flows.

Table 19 reports the results of the QML estimation of the SAR model. In columns (1) through (6), for both network structures (common origin and common destination), and all three outcome variables, the coefficients ρ are positive and statistically significant at 1 percent level. Such results indicate that the investment flows spill over positively in their neighboring city dyads.

Given the estimates in Table 19 and Table 1, I conduct the following counterfactual analysis: suppose for all city dyads ij, there is at least one official presiding in city j who was born in city i. In other words, in the counterfactual case, $Hometown_{ijt} = 1$ for all ij and t. Denote the vector of increase in investment flow after all $Hometown_{ijt}$ turn to 1 as α. Thus equation (4) indicates that the increase in y_{ijt} is $\Delta y = (I - \rho W)^{-1}\alpha$, where W is the spatial weighting matrix $\{w_{i'j'ij}\}$.

The results of the counterfactual analysis are shown in Table 20. For all three outcome variables, there is a huge increase in its value in the counterfactual case. The increase for the network with

Table 19: Network spillover effects in investment flows: SAR model

	(1)	(2)	(3)	(4)	(5)	(6)
	log(1+Capital flows)		log(# of moving firms)		1(Capital flows>0)	
	common origin	common destination	common origin	common destination	common origin	common destination
ρ	0.762***	0.143***	0.728***	0.442***	0.739***	0.104***
	(0.0148)	(0.0161)	(0.00490)	(0.00400)	(0.00210)	(0.00220)
Controls	Y	Y	Y	Y	Y	Y
Dyad FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y
Observations	611240	611240	611240	611240	611240	611240
R-squared	0.426	0.264	0.155	0.063	0.360	0.223
Number of City Dyads	87320	87320	87320	87320	87320	87320

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. * Significant at 10%, ** 5%, *** 1%.

common origin is larger than that for the network with common destination, since the spillover effects are stronger for the former case.

8 Conclusion

In this paper, I study the effects of hometown favoritism on intercity investment in China, i.e., whether and how government officials will bring more investment from their hometown. In generalized difference-in-differences specifications, I find that the intercity investment, measured by the total capital at registration of newly created firms, increase by about 15%. The results are qualitatively similar for IV estimation.

In the exploration for heterogeneity, I find that in cases with greater entry costs or information asymmetry, the effects of hometown favoritism on investments are more salient. Such evidence supports the explanation that officials reduce the information asymmetry and thus entry barriers for businesspeople in their hometown.

I also find that officials with stronger promotion incentives bring more investments from hometown, and that officials who bring more investments from hometown have better chances of promotion. Nevertheless, I find that corrupt officials do not attract more investments from hometown, or that officials who attract more investments from hometown are more likely to be caught for corruption. These results support the argument that promotion incentives are at play in the hometown favoritism, rather than that officials and businesspeople form collusive and corruptive deals. From another perspective, I find that firms do not enjoy preferential treatment as they do not get any discount in the land market.

By studying the probability of survival, the patent application, and local economic growth, I find that the hometown favoritism is beneficial to productivity and local development. Firms with hometown connections with officials are more likely to survive in the long run, and are more innovative. Cities with greater share of investments from hometown experience faster economic growth.

Moreover, I structurally estimate a discrete choice model of firms' location choices. In the logit choice setting, and exploiting whether the officials are at the last term before retirement as the instru-

Table 20: Counterfactual analysis

	log(1+Capital flows)	log(1+# of firms)	1(Capital flows>0)
Mean of the data	1.756	0.200	0.276
Mean of the counterfactual, common origin	11.510	1.127	0.697
Mean of the counterfactual, common destination	4.800	0.683	0.359

Notes: The results are calculated given the estimates of ρ in Table 19 and the estimates of effects of $Hometown_{ijt}$ in Table 1.

ments, the estimates indicate that officials reduce the entry costs for firms from their hometown.

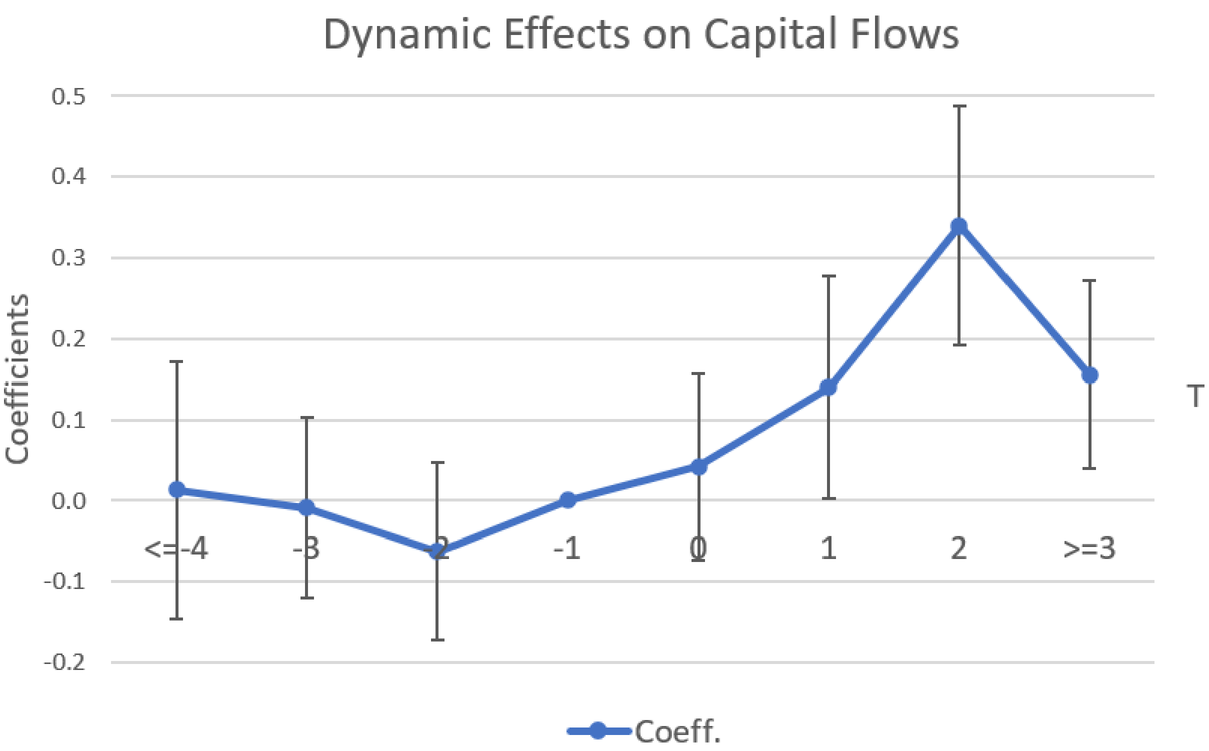
Finally, I study the spillover effects of the intercity investments. Using the SAR model and QML estimation method, I find that intercity investments spill positively over neighboring city dyads. Based upon these estimates, I conduct a counterfactual analysis for the case in which hometown favoritism exists in all city dyads. In the presence of the positive spillover effects, the effects of hometown favoritism are amplified in the intercity investment networks.

Appendix A Figures and Tables

Table A1: Summary statistics

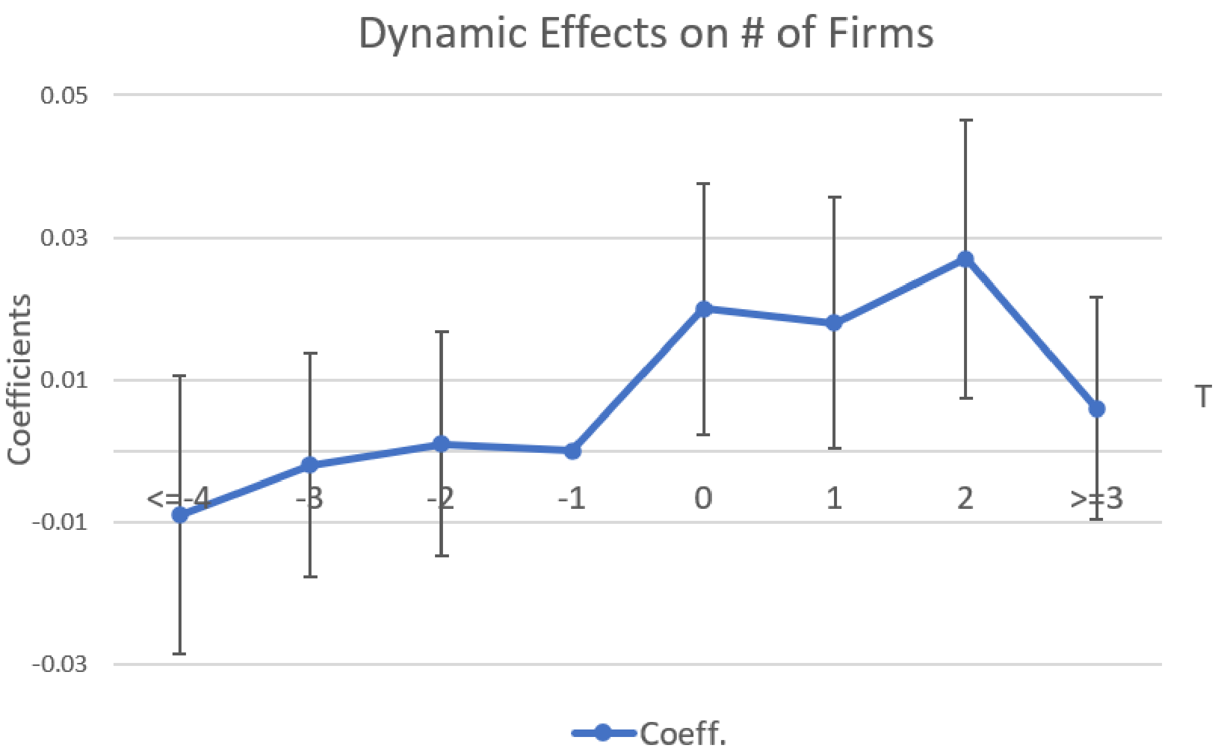
Variable	Obs	Mean	Std. Dev.	Min	Max
	Panel A: City dyad data set				
log(1+Capital flows)	611240	1.756	3.131	0	17.287
log(1+# of firms)	611240	0.200	0.693	0	10.386
1(Capital flows>0)	611240	0.276	0.447	0	1
1(Official in j born in i)	611240	0.011	0.103	0	1
log(per capita real GDP, origin)	611240	9.653	0.683	8.214	11.726
log(per capita real GDP, destination)	611240	9.653	0.683	8.214	11.726
log(population, origin)	611240	5.809	0.736	3.374	8.111
log(population, destination)	611240	5.809	0.736	3.374	8.111
	Panel B: Official-term data set				
1(promotion, city officials)	3425	0.103	0.305	0	1
share of investments from hometown, city officials	3425	0.042	0.154	0	0.999
1(promotion, provincial officials)	399	0.103	0.304	0	1
share of investments from hometown, provincial officials	399	0.010	0.044	0	0.699
	Panel C: Official data set				
1(caught for corruption, city officials)	1216	0.099	0.299	0	1
share of investments from hometown, city officials	1216	0.038	0.147	0	0.992
1(caught for corruption, provincial officials)	98	0.101	0.302	0	1
share of investments from hometown, provincial officials	98	0.022	0.068	0	0.432
	Panel D: Land transaction data set				
log(Unit land price)	115180	5.351	1.720	1.880	14.886
log(Land area)	115180	0.666	0.805	0.001	6.909
1(Land is purchased when official presiding i was born in j)	115180	0.023	0.149	0	1
	Panel E: Survival analysis data set				
1(From hometown, in office)	1428417	0.014	0.118	0	1
1(From hometown, out of office)	1428417	0.121	0.326	0	1
1(official born in i working in other cities)	1225361	0.194	0.395	0	1
	Panel F: Firm-patent data set				
1(patent application)	910419	0.024	0.154	0	1
	Panel G: City-year data set				
GDP growth rate	2072	0.158	0.075	-0.585	0.855
share of investment from hometown	2072	0.004	0.009	0	0.050

Figure A1: Estimating the dynamic effects on $\log(1 + Capital\ flow_{ijt})$



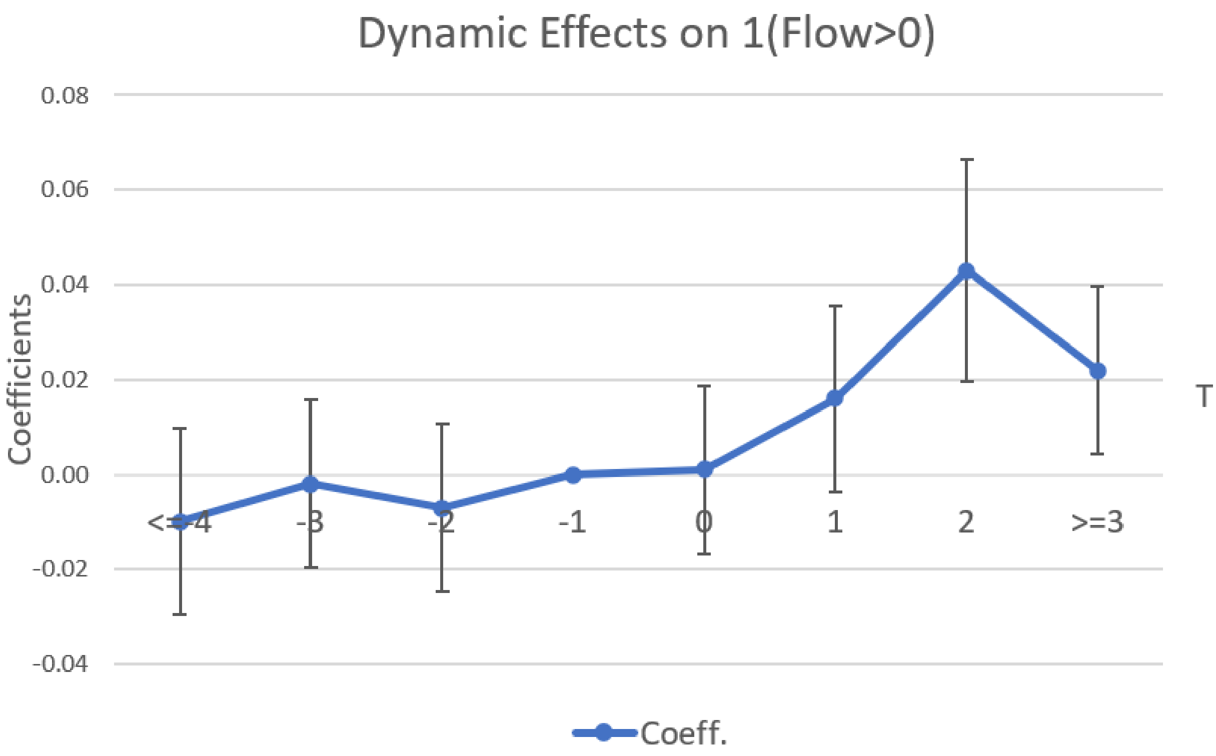
Notes: The figure illustrates the dynamic effects (four-year range before and after the treatment) of the treatment $Hometown_{ijt}$ *on* $\log(1 + Capital\ flow_{ijt})$. *The horizontal axis measures the year since the city dyad experienced a treatment. 0 represents the first year of the new official. The vertical axis measures the regression coefficients for the dynamic effects. The coefficients are obtained using the baseline specification (with controls, city-dyad fixed effects and year fixed effects), with the only exception that the dummy for the transfer is replaced by the interaction terms of the dummy for treatment and dummies for time. The figure shows that the positive effect of the transfers is restricted to the period in which the new official has arrived* ($t \geq 0$)*. The vertical line around each plotted coefficient indicates the 95% confidence interval, with standard errors clustered at the city-dyad level. Every estimated effect is compared to the year that is one year prior to that of the new official's arrival, which is standardized to 0.*

Figure A2: Estimating the dynamic effects on $\log(1 + \#\ of\ firms_{ijt})$



Notes: The figure illustrates the dynamic effects (four-year range before and after the treatment) of the treatment $Hometown_{ijt}$ *on* $\log(1 + \#\ of\ firms_{ijt})$*. The horizontal axis measures the year since the city dyad experienced an official transfer. 0 represents the first year of the new official. The vertical axis measures the regression coefficients for the dynamic effects. The coefficients are obtained using the baseline specification (with controls, city-dyad fixed effects and year fixed effects), with the only exception that the dummy for the transfer is replaced by the interaction terms of the dummy for treatment and dummies for time. The figure shows that the positive effect of the transfers is restricted to the period in which the new official has arrived (*$t \geq 0$*). The vertical line around each plotted coefficient indicates the 95% confidence interval, with standard errors clustered at the city-dyad level. Every estimated effect is compared to the year that is one year prior to that of the new official's arrival, which is standardized to 0.*

Figure A3: Estimating the dynamic effects on $1(Investment\ flow_{ijt} > 0)$



Notes: The figure illustrates the dynamic effects (four-year range before and after the treatment) of the treatment $Hometown_{ijt}$ *on* $1(Investment\ flow_{ijt} > 0)$*. The horizontal axis measures the year since the city dyad experienced a treatment. 0 represents the first year of the new official. The vertical axis measures the regression coefficients for the dynamic effects. The coefficients are obtained using the baseline specification (with controls, city-dyad fixed effects and year fixed effects), with the only exception that the dummy for the transfer is replaced by the interaction terms of the dummy for treatment and dummies for time. The figure shows that the positive effect of the transfers is restricted to the period in which the new official has arrived (*$t \geq 0$*). The vertical line around each plotted coefficient indicates the 95% confidence interval, with standard errors clustered at the city-dyad level. Every estimated effect is compared to the year that is one year prior to that of the new official's arrival, which is standardized to 0.*

Table A2: IV estimation for baseline

	(1)	(2)	(3)
		GMM	
	log(1+Capital flows)	log(1+# of firms)	1(Capital flows>0)
1(Official in j born in i)	0.225***	0.0320***	0.0304***
	(0.0724)	(0.0104)	(0.0108)
Controls	Y	Y	Y
Dyad FE	Y	Y	Y
Year FE	Y	Y	Y
Observations	611240	611240	611240
R-squared	0.031	0.027	0.020
Number of City Dyads	87320	87320	87320
Kleibergen-Paap rk Wald F statistic		2978	
Hansen J statistic	0.758	3.621	0.996

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. The instruments are the interactions of a dummy indicating whether the lag GDP of destination city is greater than that of the origin city, and two dummy variables equal to 1 if the city officials (city mayor and party secretary) or provincial officials (provincial governor and party secretary) are at the last term before the final chance of promotion. * Significant at 10%, ** 5%, *** 1%.

Table A3: Placebo test: using inverse hometown and workplace as independent variable

	(1)	(2)	(3)
	log(1+Capital flows)	log(1+# of firms)	1(Investment flows>0)
1(Official in j having hometown i, inverse)	0.0175	-0.00410	0.00229
	(0.0379)	(0.00514)	(0.00583)
Controls	Y	Y	Y
Dyad FE	Y	Y	Y
Year FE	Y	Y	Y
Regional Political Cycles	N	N	N
Observations	611240	611240	611240
R-squared	0.031	0.028	0.020
Number of City Dyads	87320	87320	87320

Notes: The sample covers 87320 city dyads from 2005 to 2011. In all columns city-dyad and year fixed effects are included. Controls include log per capita real GDP and log population of both the origin and the destination cities, linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which interacted with the government intensively, and linear time trends interacted with the difference in the destination and origin provinces of the proportion of firms which had an office dealing with the relationship with the government. Regional political cycles refer to the interaction between two regional dummies and a dummy for the year in the national political cycle. * Significant at 10%, ** 5%, *** 1%.

References

[1] B. Y. Aw, M. J. Roberts, and D. Y. Xu. R&d investments, exporting, and the evolution of firm productivity. *American economic review*, 98(2):451–56, 2008.

[2] S. Berry, J. Levinsohn, and A. Pakes. Automobile prices in market equilibrium. *Econometrica: Journal of the Econometric Society*, pages 841–890, 1995.

[3] S. T. Berry. Estimation of a model of entry in the airline industry. *Econometrica: Journal of the Econometric Society*, pages 889–917, 1992.

[4] S. T. Berry. Estimating discrete-choice models of product differentiation. *The RAND Journal of Economics*, pages 242–262, 1994.

[5] L. Brandt, G. Kambourov, and K. Storesletten. Barriers to entry and regional economic growth in china. 2020.

[6] W. Carlin and C. Mayer. Finance, investment, and growth. *Journal of financial Economics*, 69(1): 191–226, 2003.

[7] T. Chen and J. K.-s. Kung. Busting the princelings: The campaign against corruption in chinas primary land market. *The Quarterly Journal of Economics*, 134(1):185–226, 2019.

[8] J. Chu, R. Fisman, S. Tan, Y. Wang, et al. Hometown favoritism and the quality of government monitoring: Evidence from rotation of chinese auditor. Technical report, Boston University-Department of Economics, 2020.

[9] F. Cingano and P. Pinotti. Politicians at work: The private returns and social costs of political connections. *Journal of the European Economic Association*, 11(2):433–465, 2013.

[10] Q.-A. Do, K.-T. Nguyen, and A. N. Tran. One mandarin benefits the whole clan: hometown favoritism in an authoritarian regime. *American Economic Journal: Applied Economics*, 9(4):1–29, 2017.

[11] M. Faccio. Politically connected firms. *American economic review*, 96(1):369–386, 2006.

[12] T. Ferguson and H.-J. Voth. Betting on hitlerthe value of political connections in nazi germany. *The Quarterly Journal of Economics*, 123(1):101–137, 2008.

[13] R. Fisman. Estimating the value of political connections. *American economic review*, 91(4):1095–1102, 2001.

[14] R. Fisman and Y. Wang. The mortality cost of political connections. *The Review of Economic Studies*, 82(4):1346–1382, 2015.

[15] R. Fisman, J. Shi, Y. Wang, and R. Xu. Social ties and favoritism in chinese science. *Journal of Political Economy*, 126(3):1134–1171, 2018.

[16] J. H. Fiva and A. H. Halse. Local favoritism in at-large proportional representation systems. *Journal of Public Economics*, 143:15–26, 2016.

[17] R. Hodler and P. A. Raschky. Regional favoritism. *The Quarterly Journal of Economics*, 129(2): 995–1033, 2014.

[18] A. I. Khwaja and A. Mian. Do lenders favor politically connected firms? rent provision in an emerging financial market. *The Quarterly Journal of Economics*, 120(4):1371–1411, 2005.

[19] D. Kong, Y. Pan, G. G. Tian, and P. Zhang. Ceos' hometown connections and access to trade credit: Evidence from china. *Journal of Corporate Finance*, 62:101574, 2020.

[20] M. König, Z. M. Song, K. Storesletten, and F. Zilibotti. From imitation to innovation: Where is all that chinese r&d going? Technical report, National Bureau of Economic Research, 2020.

[21] L.-f. Lee and J. Yu. Estimation of spatial autoregressive panel data models with fixed effects. *Journal of Econometrics*, 154(2):165–185, 2010.

[22] H. Li and L.-A. Zhou. Political turnover and economic performance: the incentive role of personnel control in china. *Journal of public economics*, 89(9-10):1743–1762, 2005.

[23] H. Li, L. Meng, Q. Wang, and L.-A. Zhou. Political connections, financing and firm performance: Evidence from chinese private firms. *Journal of development economics*, 87(2):283–299, 2008.

[24] X. Shi. Peer effects, social ties, and corruption: Evidence from china. *Social Ties, and Corruption: Evidence From China*, 2020.

[25] X. Shi and T. Xi. Race to safety: Political competition, neighborhood effects, and coal mine deaths in china. *Journal of Development Economics*, 131:79–95, 2018.

[26] X. Shi, T. Xi, X. Zhang, and Y. Zhang. Moving umbrella: Bureaucratic transfers, collusion, and rent-seeking in china. Technical report, Working Paper Series of the China Center for Economic Research, 2018.

[27] C. Walsh. Firm creation and local growth. *Available at SSRN 3496782*, 2019.

[28] C. Xu. The fundamental institutions of china's reforms and development. *Journal of economic literature*, 49(4):1076–1151, 2011.

[29] Y. Yao and M. Zhang. Subnational leaders and economic growth: evidence from chinese cities. *Journal of Economic Growth*, 20(4):405–436, 2015.