

Go with the Politician

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Abstract:

By combining data from 1,055 local government leaders who had been required to move with data on 1 million firm land transactions from 2006 to 2016 in China, we find that firms followed their headquarter prefecture politician's move by purchasing 76% more land parcels, with 54.52% lower unit prices. Land usage efficiency, measured by light intensity, is also lower for these follower firms' land parcels, later on. We suggest that cronyism explains our findings. The anti-corruption campaign since 2012 instead led to higher land purchase concentration. Identification is from within firm variation at various prefectures through politician turnover.

Keywords: Crony; Corporate Land; Politician Turnover; China

JEL classification No. : D73, O10, P26

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1. Introduction

Cronyism is rising around the world, even in developed countries, as seen most recently from the Trump Presidency in the US.¹ Not only are questions being raised regarding Trump's own business, the Trump organization, as being potentially in conflict with the state's interest, but he also appoints his relatives, such as his daughter Ivanka, to important White House positions. China ranked 19th in the Economist's crony capitalism index in 2016, which is very high, despite China's continuing self-proclaimed socialism. Even though China achieved remarkable economic growth in the past decades, distortion, such as resource misallocation, is rampant. High growth and high distortion co-exist in China (Allen, Qian, and Qian, 2005; Hsieh and Klenow, 2009). A natural conjecture and extensive anecdotal evidence suggests that cronyism, or alternatively named political connection between firms and the government is the key generator for distortion in China. Distortion not only besets unfair economic inequality, where connected people obtain wealth through cronyism, but more importantly casts a cloud on China's future growth through lowering economic productivity.

However, literature on connections between firms and politicians, pioneered by Fisman (2001) and Faccio (2003) broaches the endogeneity issue of mutual choice, that is, firms choosing to have a politician sitting on its board and a politician choosing to sit on its board based on two sides' characteristics (Schoenherr, 2018). Moreover, in weak institutional environment countries which are world's majority ones surely including China, firms can bribe to connect, substitutable to politician sitting on firm board method of connecting, making connection identification even harder.

This paper identifies the effect and consequence of political connections from within firm variation (with firm by year fixed effects controlled) on each firm's regional land

¹ For example, please see <http://fortune.com/2016/12/07/donald-trumps-crony-capitalism/> for "Donald Trump's Crony Capitalism".

purchases, by utilizing local political leader turnover data and over one million land parcel transaction data. One unique institutional feature in China is that local leaders are often moved from one prefecture to another,² and one reason often offered by the central government is that this is to reduce nurtured cronyism. Such plausibly exogenous political turnover creates within firm connection variation across different prefectures.

There are several reasons for us to focus on local governments. First of all, it's natural. Considering China's huge population and large number of firms, it is obvious that the central government's interaction with firms is limited, simply due to a limited capacity to provide attention. Local government is better positioned to study politician/business relations. Local government is important in many developing countries, such as China, Brazil, and India, typically absorbing up to 70% of fiscal expenditure. Blanchard and Shleifer (2001) and Xu (2011) pioneered "tournament" theory, which explains local government's key role in China's growth, where competition among local government officials for career promotion has driven China's superstar growth.

Land is our investigation target for the following reasons. Land is important to both firms and local governments, and also a key factor in production, especially now when Chinese land or related residential real estate prices in major prefectures are at world highs (see Figure 1³). In our dataset, on average, firms purchased 20 land parcels and the majority of listed firms purchased at least one land parcel. So land purchase is frequent at both extensive and intensive margins. For local governments, land is the sole production factor under their control, following two major reforms initiated by the central government, including financial reform, which abolished local government's control over state banks' local branches, and household registration reform or *Hukou*

² Most of the subdivision we are studying is at prefecture level or prefecture-level city for its full name. We are also studying leaders at provincial level including direct-controlled municipalities, which are above prefecture level administrations. But we call all these subnational units as prefectures, for simplicity.

³ In 2019, apartment unit price in Beijing, Shanghai, and Shenzhen reached around 10,000 US dollars per square meter, comparable to that in New York and San Francisco (www.numbeo.com). For related high housing price issue, please see Glaeser, Huang, Ma, and Shleifer (2017) for details.

reform which increased workers' mobility (evidenced from the movement of large numbers of migrant workers in the late 1990s). Moreover, land has become the most important local government revenue source since 1994, as seen from Graph 2. Revenue from selling land amounts to around 70% of local government revenue in the recent decade. Lastly, the Greek definition of cronyism largely has the meaning of "long term". Compared to other industry policies, such as cash subsidies, which usually takes the form of a lump sum payment, we view land as much more suitable than other factors.

It is no surprise that the focus of this paper concerns land cronyism, given the importance of land to firms and local government, and the extensive regulation of the land market. The largest anti-corruption campaign was initiated by President Xi in 2012, resulting in many government officials stepping down. "Land" was a commonly repeated word in corruption news reports where many corruption cases were linked to either residential real estate firms or the residential real estate industry as part of a firm's business, or use land for non-residential purposes. Corruption cases during the recent anti-corruption campaign were often related to land deals. For example, He Chou, who was the then Part Secretary, the de facto leader of the Kunming Prefecture region from 2007 to 2011, was well connected to land deals. He Chou was the Prefecture Leader of Suqian Prefecture in Jiangsu Province before 2007. After he moved to govern Kunming Prefecture, 25 real estate and construction firms from Suqian invested heavily in Kunming. The locals described many firms from Jiangsu Province or specifically Suqian suddenly springing up along Kunming streets between 2007 to 2011.

By employing data from the turnover of 1,035 prefecture leaders and data from over one million land sale transactions from 2006 to 2016, then controlling a full range of very flexible fixed effects, we find that interacted firms,⁴ defined as firms with headquarters in local leader's previous governed regions, purchased 76% more land

⁴ We are cautious by using the word "connection" before we provide more evidence that interaction leads to political connection. Moreover, we want to be different from the political connection literature mentioned above since their definition is different by counting whether politician sits on the firm board.

parcels in terms of value. Those land parcels had 54.52% lower unit prices, determined after having land characteristics controlled, and these land parcels have lower land usage efficiency as measured by nighttime light intensity. These effects also get stronger for higher intensity interacted firms where interaction intensity is defined as the number of years a leader governed his or her previous governed region or how soon the current leader left his or her previous governed region. We also explored dynamic aspects of interaction and show that the “go with the politician” effect becomes more prevalent as a local leaders’ time in office increases.

Endogeneity is a major concern in politician-firm cronyism literature. The stated purpose of the central government moving local leaders across prefectures is to reduce corruption. Therefore, it has to be unexpected. We also look at firms in a prefecture that will shortly become interacted but none of the pre-interacted trends are significant for our various specifications. Moreover, the decision to move a local leader comes from upper level government, hardly relying on single firm’s characteristics. Such local government official rotation has existed for thousands of years in China (Lau, 2010; Xu, 2011), and heritage consideration also largely reduced endogeneity.

Our paper reduces endogeneity concerns by controlling a series of flexible fixed effects including prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects. These fixed effects effectively control for time-invariant attributes of firms and prefectures, and for time varying economic conditions of prefectures and individual firm. If a local leader moves from prefecture A to B, then A is called origin prefecture, while B is called destination prefecture. The prefecture by year fixed effects control prefecture important factors such as GDP, population, real estate purchase regulation, land supply elasticity, and financial development or credit condition, which influence a firm’s decision to invest in a prefecture. The prefecture by year fixed effects also partially subsume factors affecting the central government’s politician regional allocation. If only a local Party Secretary, the de facto boss in a region, is considered, these prefecture by year fixed effects also

absorb the leader's time varying characteristics such as age and personal connection with upper levels in the government. The firm by year fixed effects absorb key firm characteristics such as Tobin's q , cash flow, state ownership status, and sales growth rate. Most importantly, the firm by year fixed effects take out a firm's traditional political connection measure using a CEO's past government working experience or whether the firm's board includes former politicians. Since the firm's headquarter is in the origin prefecture, the firm by year fixed effects actually implicitly contain origin prefecture by year fixed effects, which absorbs similar prefecture attributes with destination prefecture, such as GDP growth. We also add origin province to destination province fixed effects to control regional similarities which might drive firm's real estate investment or leader's move. That experience in one prefecture can be applied to another prefecture is often mentioned by Central Government media outlet, Xinhua News, as a key factor in transferring leaders.

The observation of land purchase flow following a politician's move does not necessarily indicate corruption or any connection between the politician and his follower firms. It could be explained, in economic theory, from an information asymmetry perspective where that politician grants lands to these firms through familiarity. In this case, under information asymmetry theory (Stiglitz and Weiss, 1981), we should expect these firms to be better performers in their own headquarter prefecture and the land parcel usage to bear higher efficiency. However, we observe the opposite, that by using light intensity as a measure of land usage efficiency, we find that land purchased by interacted firms had lower light intensity growth compared to non-interacted firms, suggesting evidence that information asymmetry channels do not apply in this instance. Lower light intensity, indicating lower economic activity, might be understandable for but is unlikely for residential land, where China's housing price is rising rapidly. The Chinese Central Government requires real estate developers or firms to start construction immediately after purchase, with delays no longer than two years or otherwise face the risk of being taken over by local government. Moreover, there is year limit regulation from Central Government on firms selling constructed

apartments, to prevent hoarding constructed apartments beyond year limit to gain from future price appreciation. According to a report by the Ministry of Land and Resources, the land market's regulator from the Central Government in 2010, prior to that time, even when there was less land market sales volume, there were 2,208 cases where land parcels were not developed past two years.⁵ Because the local government is the main year limit regulation implementer, a close relationship with the local government is beneficial for firms to evade regulation from the Central Government.

Moreover, we utilize a large scale nationwide anti-corruption campaign event since 2012 and find that although the “go with the politician” effect decreased to some extent after 2012, the land purchase among interacted firms became highly skewed to fewer buyers, in line with Shleifer and Vishny (1993) theory that the imperative of secrecy of corruption will have fewer agents to play the game in giving bribes. We also investigate the other important category of firms, locally headquartered firms, and find that although their land purchase quantity is similar with our interacted firms, the anti-corruption campaign has a significantly negative impact compared to interacted firms, confirming *guanxi* or corruption needs time to build while local firms are new and might not be reliable in a stricter punishment environment.

Our paper contributes to the literature on political connections, starting from works by Fisman (2001) and Faccio (2006), who use whether publicly listed firms have board members who are ex-government officials as an indication of whether firms are connected or not. Those and latter studies document that such political connections bring significant benefits to firms such as cheaper credit (Khwaja and Mia, 2005), or bank bailout (Faccio and McConnell, 2006). Fan, Wong, and Zhang (2007) found that such political connection in China brings harmful effects to firms. They argue that former politicians working in a firm can be seen as a proxy for government intervention. Another potential problem with this approach is the endogenous choice of having a past

⁵ This website lists the detailed location and buyers of land parcels violating China's land regulation. http://www.yicai.com/show_topic/388496/

politician on a board as a past politician may choose that position as a function of the firm's characteristics as well (Schoenherr, 2018). However, plausibly the exogenous move of politicians in our setting provides an experiment for the study of politicians. Under China's strong authoritarian regime, firms bribing politicians and politicians receiving bribes are both illegal. It takes time to build trust and nurture a close relationship between politicians and businesses for bribery to happen. Once such *guanxi* or relation is established, "each can ask a favor of the other with the expectation that the debt incurred will be repaid sometime in the future" argued by Yang (1994) in her comprehensive study of interpersonal connections in China. Therefore, we not only obtained results on firms benefiting by obtaining land cheaply, but also complement a new strand of literature alongside Fisman and Wang (2015), on the downside of political connections through discovering that connected firms generate social loss, evidenced through lower light intensity after purchase.

Our paper is related to the literature of shared codes, such as culture, language, religion, or past interaction on economic outcomes. We define a firm's headquarter prefecture and a leader's governing region the same as shared codes, similarly with political science literature, often using co-working experience to validate an assumption of a strong political connection between two politicians. In this regard, this paper is very close to the work by Fisman, Paravisini, and Vig (2017), which also used loan officer rotation as exogenous shock to culture proximity between a loan officer and borrowers and identifies such proximity on loan quantity and loan quality. They argued, at the beginning of their article, that their main contribution was to use micro data which raised less endogeneity concern. They found being in a same group would generate better resource allocation outcome in contrast to our finding.

Our paper also contributes to the literature on personnel economics of the state, where the review article by Finan, Olken, and Pande (2015) found the literature lacking in studying local government leaders as policy implementers. Although often claimed that rotation policy is a key method of policymakers to reduce corruption, this paper

suggests that further monitoring of local officials is needed as there might be ongoing corruption spillovers occurring from one region to another.

Lastly, our paper is related to current policy issues in China such as the roaring housing price trend and ghost prefectures (Glaeser, Huang, Ma, and Shleifer, 2017). This paper suggests that a firm's political connection shelters them from regulation with the purpose of increasing the supply of housing units, in accordance to the law that requires building on land within two years after purchase, contributing to roaring housing prices. Selling housing units outside mandated time frames maintains a high selling price but breaks the law and may be contributing to the growing emergence of ghost towns.

The rest of the paper proceeds as follows. Section 2 will introduce China's institutional background and land market. Section 3 describes the data and chosen methodology. Section 4 presents results. Section 5 shows robustness checks. Section 6 shows future results including heterogeneity analysis, anti-corruption campaign as a natural experiment, and locally headquartered firm analysis. Section 7 concludes.

2. Institutional Background

2.1 Importance of Local Government in China, Including Land Allocation

China has an authoritarian political structure and local government officials are held to a high degree of accountability. Part of the reason is that the central government uses its centralized political power to promote local politicians and it is highly possible for the central government to set GDP growth as its main target.⁶ So local leaders work hard to fulfill GDP goals, as described by Blanchard and Shleifer (2001), and formally tested using provincial GDP and local leader promotion data provided by Li and Zhou

⁶ Another strand of literature emphasizes political connection to higher ranked politicians as main factor for political promotion, such as Shin et al. (2012).

(2004).

Examining the regional economy is very important to understand China's aggregate growth, as local government is responsible for the majority of China's government spending (around 70%) compared to the rest of central government expenditure. Please see more political and economic linkages at local level and how such interplay is important in China's past decades' success as explored by Xu (2011).

China adopts M-form (multi-divisional form) central and local government relations, defined by Qian, Roland, and Xu, (2006) where local government consists of "self-contained units" and complementary tasks are grouped together, in contrast to a U-form (unitary form) organization. They show that such a political structure arrangement facilitates regional coordination and political experimentation. For example, a prefecture that has two bureaus, a Department of Land and Resources, and a Department of Housing and Urban-Rural Development, two key departments related to the allocation and use of land. Vertically, they are under the leadership of their respective ministers. Under the U-form political structure, the two departments lean towards the two ministries more than their located prefecture leader. However, with the M-form structure in China, regional leaders, instead of departmental upper layers, are empowered in the Central Government.

Why is it important for firms to connect to local leaders? The political arrangement enables Prefecture Leaders to easily coordinate each department in pursuit of regional policy targets. Xu (2011) used Special Economic Zone (SEZ) data, as an example. The Central Government experimented with regional growth by designating Shenzhen as one of early SEZs. If the Transport Department in Shenzhen did not coordinate well with Shenzhen Leader for some reason, for example, key people within the Communist Party disagree with the idea of SEZ are in the same faction of the Transport Department leader, it is highly possible for a SEZ to fail, considering the importance of infrastructure in the early stages of development. Well executed coordination between

dozens of departments in Shenzhen, under the Leader of Shenzhen Party Secretary, played a key role in Shenzhen's success, and, in turn, China's success (Xu, 2011)

2.2 Land Market in China

Land is central in the history of Chinese communist rule. Today, according to the Chinese constitution, all land is owned by the Government. Before 1949, when China was established, land was the most important factor in the Communist Party's success over their opponents. The main reason was that the communist leader Zedong Mao promised and implemented a policy of gaining and distributing lands to peasants from the hands of landlords and this made his recruitment for the People's Liberty Army a huge success. After the People's Republic of China was established, before the 1980s, individuals could not own or rent land, and collectivism led to the greatest famine ever experienced, from 1959 to 1961. After Xiaoping Deng initiated the Opening and Reform Policy in 1978, the household responsibility system, where individual peasants obtained rights to use land, began the first experiment in Anhui Province before gradually implementing it across the country. However, urban areas, had to wait until 1987 for public auction of land parcels to commence in China, firstly in the Shenzhen Special Economic Zone. Although the word "purchase" is used in this paper, it actually refers to buying land user rights for a certain number of years: 70 years for residential lands; 50 years for industrial lands; and 40 years for commercial lands, because the Chinese Constitution continues to endow all land ownership to the Central Government.

The Government is the sole seller of land in China and sets the land quota for each prefecture. Central Government leaders are sensitive about strategic food security and restrict land supply due to the shortage of arable land in China and because many leaders in China experienced, first hand, the Great Famine in the 1960s. Local Government has significant discretionary power over naming land types for different usages, such as industrial land use and residential land use. The land market is arguably the most corrupt one (Zhu, 2012), because of the higher number of regulations on land

usage coupled with a weak institutional environment, despite the fact that other countries also have extensive zoning regulations on housing and related land use. Corruption in land and housing pressured the Central Government to require that residential and commercial land to be sold publicly since 2004. Because the local government has been constrained in developing local economies, and industrial lands are related to firm production, unlike residential and commercial lands, industrial lands might not be as corrupt as the others. Local governments are required to publicly auction industrial lands as well but the selection of firms are left to their discretion as they have their own industrial policy and utilize soft information better than the Central Government. So while industrial lands are publicly auctioned, at the same time, there are limitations on which firms may purchase those lands.

Although the Central Government realized the importance of land and have required all residential and commercial land sales to be publicly auctioned since 2004, land sale corruptions were still widespread (Cai, Henderson, and Zhang, 2013), and the real estate industry is arguably the most corrupt because of its extensive regulations (Zhu, 2012). For example, in some mid-sized prefectures, buyers are required to pay social security to the local government where the house's is located, for at least one year, to be eligible to purchase. Regulations are everywhere, from ratio of a building's floor to the percentage of green space. Violation of any regulation lead to unsaleable building units.

3. Data and Methodology

In this paper, we mainly used three datasets on: publicly listed firms; land transactions; and local government officials. Table 1 and 2 show the summary statistics, with variable names explained in Appendix Table A1.

Data on the publicly listed companies is from WIND, which is the main provider in China, akin to WRDS in the US. We manually collected public listed company

subsidiary names from annual reports as well, to match their land parcel data with buyer names.

Data on land transactions was manually collected from a government disclosure website (www.landchina.com), where the government has required all land transactions to be listed, to increase transparency, since 2006. The webpage provides the exact location of each land parcel, sale price, unit price floor to area ratio, buyer's name, land usage type and a land scale from 1 to 12, indicating land quality. Before selling a land parcel, a local government can increase the land's quality by providing electricity and water access, or by reducing a slope where the slope may make construction difficult.

Data on local political leaders, prefecture or provincial level Party Secretary, Mayor, and Governor is from CSMAR.⁷ The Party Secretary is the de facto boss and, theoretically, the Mayor or Governor is responsible for the implementation of the region's policies. We collected each leader's name, age, education level and where they went after leaving their political position. Table 3 shows local leader turnover frequency by province in our sample period and each province's GDP per capita in 2016, as a proxy for the economic development level. Besides the four directly-controlled municipalities of Beijing, Chongqing, Shanghai, and Tianjin, provinces have fairly comparable level of local leader turnover number, with the most in Guangdong, and the least in Hainan, highly correlated with the number of prefectures in a province.

We used satellite data on nighttime light intensity, obtained from the National Oceanic and Atmospheric Administration (NOAA), to proxy for land usage efficiency. Light intensity data gathered between 8:30 pm to 10:00 pm from weather satellites that circle the earth 14 times a day, was utilized. High quality data that removes cloud coverage and fires, so there are no seasonal factors, is available between 1992 and 2013.

⁷ CSMAR provides these political leaders' data in its database only after December, 2017, very recently. Before that when this research was ongoing, we manually collected data from prefecture and provincial statistical yearbooks for various years. We double checked to make sure the politician turnover data is accurate.

Data after 2013 is not used due to scale and measure change of satellites, consistent with previous literature. The light intensity scale of this nighttime light is measured from 0 to 63, with the higher number indicating more intensity and more economic activity. Considering China's GDP per capita, at around US\$5,000 during our sample period, achieving light intensity above 63 is very rare. This is consistent with Henderson, Storeygard, and Weil's (2012) assertion that nighttime light intensity as a proxy for development, is better applied in developing countries. The use of nighttime light intensity data not only makes regional analysis possible at a very fine level, but also alleviates our concern over data quality like those GDP data reported by Chinese government, for example.

We then matched the listed companies' names with land parcel buyers' names and listed companies subsidiaries' names with buyers' names. We found 2,188 out of 3,271 publicly listed companies acquired land in our data period. The average number of land parcels obtained by each public firm was 20, which is high, averaging around two pieces of land per year. Moreover, as displayed in Table 1, non-local public firms acquired around 87% of all land, showing the importance of non-local firms in a region's land market. Land types include industrial lands, commercial lands, residential lands, and public lands. Commercial lands have similar properties as residential lands, and both are developed by real estate developers.⁸ Around 13.6% of land purchased was public land, slated for public project buildings. They are sold to firms for specific purposes and construction takes the form of Public Private Partnership (PPP).

Results show the ones with a conditional sample, as the full sample has too many zeros which reduces statistical power, although full sample results, including pre-interacted trends analysis later on are also displayed to show that our main results are not driven by any sample restriction problem. The restricted sample is conditional on

⁸ Chinese households prefer to live in residential-commercial mixed communities, as shown by higher prices. Real estate developers bundle the selling of apartment with amenities mainly consisting of large shopping malls which are often developed by the same residential developer.

firm entry into a prefecture. If a firm once purchased lands from a prefecture in our sample, that firm-prefecture pair will be included. Note that even if a firm with headquarter in politician's previous working location does not seemingly overlap with the politician's time in that location as its IPO happened after the politician moved, we still include that firm in our data as it is highly likely that that firm was a significant market player in that prefecture during that politician's time even though it is not listed.⁹ One advantage using Chinese publicly listed firms data is that in our data there does not exist firm headquarter changes, alleviating our concern that firms might change their headquarter to a prefecture which produced many government official turnovers, trying to take advantage of the "go with the politician" spillover effect.

Even though a firm's time varying characteristics is irrelevant for our analysis as they are controlled by our firm by year fixed effects, one might still be curious about what different characteristics interacted and non-interacted firms have. Appendix Table A2 shows group differences between interacted and non-interacted firms by comparing key firm characteristics common in the literature, such as total factor productivity (TFP), return on assets (ROA), return on equity (ROE), Firm age, state owned enterprises (SOE), loan over assets, and $\ln(\text{Assets})$. Column (3) shows the differences between these two types of firms. Interacted firms shown in Column (3) and (4), on average, have a higher TFP, higher ROA, higher ROE, higher probability to be a SOE, lower leverage, and are larger in terms of assets. Better firms seem to have higher chance to be interacted firms.

Below is the empirical specification,

$$Y_{fct} = \beta_0 + \beta_1 \text{Interacted}_{fct} + \mu_{ft} + \lambda_{ct} + \delta_{p(f)p(c)} + \varepsilon_{fct}$$

where Y_{fct} indicates the number, area or value of land parcels that firm f obtains in

⁹ Under this circumstances, the connection to that leader is either stronger or weaker. For example, China's IPO process is lengthy. It might be under that politician's help for that firm to submit their IPO materials.

prefecture c at year t . We mainly used fractions as our investigation target, i.e., fraction of number, area or value of land parcels bought by firm f in prefecture c at year t in contrast to all land parcels transacted in prefecture c at year t . $Interacted_{fct}$ is a dummy variable which equals 1 if the headquarter of firm f originates from the previous workplace of the current official (Mayor or Party Secretary) in prefecture c at year t . We also include provincial level appointment cases in our variable construction. If a provincial leader at province B worked previously at prefecture A, then firms from A will switch their $Interacted_{fct}$ dummy from 0 to 1 in the provincial capital prefecture of B. We use the capital prefecture rather than all the prefectures in that province because provincial leaders' working and residential areas are still in the provincial capital and geographical distance is important in information transmission.¹⁰ Moreover, the politician turnover year is related to the departing and arriving politicians. The $Interacted_{fct}$ variable relates to the longest tenured politician during the transition year. For example, if the incoming politician takes his/her position in October, then $Interacted_{fct}$ is equal to one for the departing politician's interacted firms for that prefecture year. μ_{ft} denotes firm by year fixed effects. λ_{ct} denotes prefecture by year fixed effects. $\delta_{p(f)p(c)}$ denotes origin province $p(f)$ by destination province $p(c)$ fixed effects. We clustered the standard errors on prefecture, that is, we allowed serial correlation at the prefecture level.

The coefficient on *Interacted* is a difference-in-differences estimate of the effect of previously being located in the same place experience on land purchase. For example, if prefecture A had only two leaders in our sample period, moved from other prefectures of B and C, respectively, then the coefficient on *Interacted* will be the weighted average of, the difference between land purchase in prefecture A, obtained by firms headquartered in prefecture B, when the leader is from prefecture B, relative to the latter period when the leader is from prefecture C, and the difference between land purchase in prefecture A, obtained by firms headquartered in prefecture C, when the leader is

¹⁰ If a land parcel is sold to connected firms by a provincial level politician, the politician most likely picks the one he or she is familiar with. But our results are robust to using whole province land purchases.

from prefecture C, relative to the latter period when the leader is from prefecture B. Firms from other prefectures are used to estimate the fixed effects.

Furthermore, we used $Interaction_Intensity_{fct}$ to measure the intensity of firm-politician interaction. We assigned a value of 5 to $Interaction_Intensity_{fct}$ when a firm f headquarters in the prefecture which a politician at prefecture c in year t has their immediate working place. The value of $Interaction_Intensity_{fct}$ declines when the interaction between a firm and a politician is remote. For example, if politician moves from prefecture A to prefecture B, to prefecture C, to prefecture D, to prefecture E and now to prefecture F, where F is their current working prefecture, then firms headquartered in E enjoy an $Interaction_Intensity_{fct}$ value of 5 in prefecture F while firms headquartered in A have an $Interaction_Intensity_{fct}$ value of 1. We still kept the non-interacted firms value of 0.

$$Y_{fct} = \beta_0 + \beta_1 Interaction_Intensity_{fct} + \mu_{ft} + \lambda_{ct} + \delta_{p(f)p(c)} + \varepsilon_{fct}$$

Alternatively, we also considered another interaction intensity measure, measured by the years a politician and a firm had a co-working relationship, as time is an important determinant in the development of trust and relationship forming. We expect β_1 to be positive, which indicates that an interacted firm or a firm with a higher interaction intensity will purchase more land parcels. We also included a series of fixed effects, largely to alleviate our endogenous concern. We included firm-by-year fixed effects to control for firm-specific time-variant characteristics, such as financial constraints, investment styles, whether a former politician was sitting on a firm's board and CEO previous government working experience. We also included prefecture-by-year fixed effects to control for destination prefecture-specific time-variant characteristics, such as government policy and economic prosperity, which rules out concerns over reverse causality where certain prefecture characteristics may have led a politician to move to prefecture c . When only Party Secretaries are considered, the

prefecture by year fixed effects absorb Prefecture Leader characteristics such as tenure length, prefecture leader age, education, and experience, later to be shown in our robustness check section. The origin province by destination province fixed effects alleviate our concern that some similarities between regions might drive a firm's non-headquarter land purchase and the appointment of leaders between regions, for example, a similar industrial structure, or a similar culture. The similarities of two regions should subsume this factor. Existing literature shows that higher GDP growth rate and a local leader's political connection with upper level governments are major contributors for prefecture leader turnover (Li and Zhou, 2005; Shih, Adolph, and Liu, 2012). However, these two factors can be absorbed by our two flexible fixed effect controls, origin prefecture by year fixed effects for the former factor and destination prefecture by year fixed effects when only the Party Secretary is considered for the latter factor. The effect of *Interacted_{ft}* on firm outcomes Y_{ft} is therefore identified through the plausibly exogenous matching between firms and officials caused by turnover in China.

Besides the very flexible fixed effects above that have absorbed many potential endogenous factors, intuitively, endogenous concern is not severe in this setting. Local leader turnover is mostly decided by the upper level government, and is almost impossible to correlate between a single firm and a leader's move to a new prefecture. However, it is still possible that that firm is highly correlated with that firm's industry which might take an important share in the origin prefecture. We therefore examined pre-event trends to rule out this potential endogeneity issue as some underlying factor within a prefecture and firm pair might drive being both an interacted firm and the purchasing of more land parcels. That underlying factor is likely to be gradual, while changes in *Interacted* occur after leader turnover. We would thus expect firms to purchase more land parcels before becoming interacted, if that underlying factor is the main reason for increased land parcel purchases. To test whether there was such a pattern in the data, we focused on firms that are about to become an interacted firm or have been an interacted firm until recently. If there is no evident differences when interacted compared to not interacted, then this suggests interacted firms purchase more

land parcels because of being interacted rather than some underlying factor.

4. Results

Our results in Table 4 show that after a politician's move, interacted firms from the politician's previous working place result in those firms purchasing significantly more lands in the new governed prefecture or province. Our results are robust to different dependent variables such as the logarithm of land parcel number purchased, land area purchased, and land value purchased, from Columns (1) to (3), at prefecture year level. In Columns (4) to (6), we use the fraction dimension of these three measures, indicating the share of land that a firm purchases in a prefecture, over all the lands sold in that prefecture and in that year. All our regressions control prefecture times year fixed effects, firm times year fixed effects, and origin province times destination province fixed effects. Robust standard errors are clustered at prefecture level.¹¹

The results are highly statistically significant, and all are at the 1% level, indicating that switching to an interacted firm after a politician moves will result in that firm purchasing more land in that prefecture year. The coefficients regarding land value purchased in Columns (3) and (6) also are higher than the others, suggesting that, compared to land number and areas purchased, switching to an interacted firm has a higher impact on the land value purchased. The local government is often located in a prefecture's center. In China, land and housing prices are strongly correlated to proximity to the prefecture center, so unit value decreases as distance increases (Wang and Zhang, 2014). Our finding suggests interacted firms also purchase important land, closer to the prefecture's center and the local government location. This indirectly supports our political connection theory as politicians and firms interact more in closer proximity in contrast to an information asymmetry argument which would see a uniform location spread between interacted and non-interacted firms. Such a political

¹¹ Our results are quite stable using other cluster levels such as prefecture by year and province as shown in the Appendix Table A3.

connection mechanism is further supported through land value increases after we show that interacted firms obtain land cheaper by holding other land attributes constant.

The coefficient is economically sizable as well. For example, if we select the $\ln(\text{value})$ coefficient 0.5661, being an interacted firm or a firm headquartering in a politician's previous working prefecture will increase that firm's purchased total land value in a politician's current working prefecture by $100 * (\exp(0.5661) - 1) \% = 76\%$, compared to land purchase for the same prefecture year if that prefecture leader had not worked in that firm's headquarter prefecture previously. Now moving to the fraction variables in Columns (4)-(6), for example, in Column (6), an interacted firm, on average, has 0.0096 more land purchases compared to non-interacted firms. Considering the mean fraction value being 0.031, such 0.0096 is quite large at roughly 30% of the mean fraction value.

In the next step, we address the concern that unobserved changes may simultaneously increase a firm's likelihood in becoming interacted in a particular prefecture and year, and increase a firm's land purchase in that prefecture and year, although politician turnover is plausibly exogenous to firms as the Central Government appoints local leaders, and we have controlled a range of flexible fixed effects. Therefore, we first investigated whether firms that are about to become interacted are systematically different from other firms. In Table 5, we first added three pre-trend dummy variables that indicated firms that will become an interacted firm next year and within the next two or three years, respectively. We see that firms are no different shortly before becoming an interacted firm than they are in other years in which they are not an interacted firm. Moreover, the coefficients on the *Interacted* variable are barely changed throughout the columns compared to Table 4. The finding from Table 5 supports our interpretation that a firm purchases more land in a prefecture and year because they become interacted in that prefecture and year, rather than because of some underlying gradual change that simultaneously increases land purchases and the chances of becoming interacted.

To provide further support, we investigated the dynamics of *Interacted* on land purchase in detail. We estimated a specification with many dummy variables for future, current, and past interacted firms. The effect can be seen from Figure 3, where pre-trends (before a firm has interaction) and post-trends (after a firm loses interaction) are examined. Not only do we see, from these figures, significant increases of land purchases for our defined interacted firms after a politician's move, but also pre-trends and post-trends are insignificant, as shown by an overlapping with the zero line between the confidence interval, where we define post-trends after a firm switches from interacted to non-interacted as soon as interacted politician moves to a new working place or simply retires. Firms are no different shortly before becoming interacted or shortly after ceasing to be interacted than they are in other years in which they are a non-interacted firm.

Since the current data sample only includes firm-prefecture pairs where firms once purchased land in that prefecture, it is natural to consider the full sample which has a less severe endogenous entry issue but where the statistical power is reduced to a large extent as zero observations constitute almost 99% of observations. Running the full sample regression is also burdensome with too many fixed effect dummy variables with the three flexible fixed effect controls. Reassuringly, results shown in Table 6 have consistent findings with our baseline regressions, highly significant at both economic and statistical levels. The observations now expand to around 7 million. The first three columns display baseline regressions except expanded to the full sample. The last three columns add pre-trends and the three pre-trend dummy variables are all insignificant as well.

We now extend the dummy independent variable *Interacted* to continuous variables to specify the extent of interaction, *Interaction Intensity*. We used two indicators *Interaction Intensity (Co-Working Sequence)* with values from 0 to 5 where five indicates when a firm's headquarters was located in a local leader's last working region, right before their move and one indicates the farthest case, where a firm's headquarters

were located in the politician's initial working region. The other indicator is *Interacted Intensity (Year)* which denotes how many years the politician had previously worked in a firm's headquarter prefecture or province. Table 7 and 8 show baseline regression results using the two interaction intensity measures, and both are highly significant. For example, in Table 8, increasing one more year overlapping working location experience, will lift a firm's land purchase value fraction in the current politician's prefecture by 0.0022, almost equal to 7% of mean of that variable, a large size effect.

Table 9 shows that the unit land price paid by interacted firms is significantly lower, compared to other firms, suggesting favoritism from the local politician towards their previous interacted firms, especially for higher interaction intensity firms, identified using our two measures. Local government's budget is tight after the 1994 tax reform and the potential debt risk is widely reported. Land became a valuable asset after the real estate boom. Here, we controlled land characteristics not just by controlling distance, which fails to consider amenities such as a subway and schooling district, which are very important elements for real estate pricing. We instead compared a land parcel with other land parcels surrounding it within two kilometer radius. We found that previous interacted firms paid significantly lower prices. For significance at the economic level, we found that being an interacted firm will reduce the cost of land for a firm by 54.52%, a very large effect. Listed firms are often among the largest firms and surrounding land should be more likely to be purchased by smaller firms, which have a lower probability to attract a leader's attention, or become really interacted, which makes the price of these surrounding land closer to a market benchmark. Land price comparisons, as our dependent variable, can be justified reasonably.

Table 10 demonstrates that land usage efficiency, as measured by nighttime light intensity, is lower after land purchase for interacted firms, as can be seen from the significantly negative sign for the interaction term of *Post Deal* and *Interacted*, where *Post Deal* indicates the after deal dummy equating to 1 and the dependent variable is $\ln(\text{Light Intensity}+0.01)$, commonly adopted in the literature (Hodler and Raschky,

2014). Alternatively, our results are also robust for the two interaction intensity measures. We found that interacted firms have lower light intensity growth, as can be seen from the negative sign before the interaction term. We used nighttime light intensity as a measure for land usage efficiency not only because light intensity has been frequently used as a regional economic activity measure, but also because there are some particular institutional regulatory features. Keeping land undeveloped for more than two years is illegal in China. Connecting to an incumbent politician shelters firms from this land regulation. Another regulation relating to light intensity concerns the housing timeframe selling restriction, forbidding developers from asking high selling prices to deter purchasers for long time periods, shown here as weaker lights growth. Again, connecting to a politician shelters firms from this regulation. Both of the regulations seek to constraint on firm's profit maximization. Therefore firms have a strong incentive to evade them. Lower light growth results for interacted firms suggests that investment from interacted firms in the politician's new governing region is slower and this possibly rules out the information flow perspective. The negative sign of the coefficient on *Post Deal* indicates that land after purchase has a slower nighttime light intensity growth. Local government usually removes prior economic development activities on that land parcel before selling. One of the commonly seen forms is an "urban village". Their removal for new city developments must result in vanishing nighttime light intensity for some years and before then increasing. The control group gives us a benchmark on what the nighttime light intensity or economic activity would be if there was no such reconstruction. However, for robustness concern, in our Appendix Table A4, we only consider the nighttime light intensity after officially being sold by assuming all the previous nighttime light intensity as zero. The coefficients for all our key independent variables are still significantly negative.

However, that a land parcel purchased by an interacted firm has slower light growth can also be because such firm might face a higher management cost in operating on that land parcel (Giroud, 2013). The higher management cost is possibly driven by longer distance between the firm's headquarter and the purchased land parcel location. We

then test whether longer distance between a firm's headquarter and a land parcel purchased by that firm implies slower light intensity growth. We use *Remote* to denote a land parcel locating outside of a firm's headquarter province, which is a dummy variable and is equal to 1 if yes and 0 if no. We view this measure is favorable to simply using geographic distance as different provinces are highly likely to have different cultures and the larger culture difference also potentially increases a firm's management cost. By running the regression from a land parcel's nighttime light intensity on *Post Deal* and its interaction with *Remote* in Appendix Table A5, we find that the coefficient on the interaction term is not significant, which suggests the higher management cost factor might not be the reason for *Interacted* firms' lower light intensity growth.

In Appendix A6, we examine the effect of being interacted on the extensive margin of our results, that is, whether being interacted in a market will lead a firm to enter that market. Here market is defined as a prefecture and year. Entry is defined as whether a firm purchases land, and is a dummy variable, equal to 1 if a firm has purchased a land parcel up until a politician leaves that prefecture, 0 otherwise. Our results are still highly significant. The appointment of an interacted politician will increase the entry probability to that governed prefecture by 29.2%. The interaction intensity dimensions are also investigated, and interacting with a politician for one more year will increase that firm's entry probability by 5.06%.

5. Robustness

Table 11 and 12 show various robustness tests. The split of robustness tests into two tables is simply for table space consideration. We used a fraction of the number of land parcels purchased, a fraction of land areas purchased, and a fraction of land value purchased in a prefecture-year as dependent variables.

In Table 11, Columns (1)-(3) display baseline regressions, excluding terms of office shorter than one year. Such cases are, for transition purposes, under the Central

Government's control. Related politicians know such transitions in advance and it is highly possible that interacted firms know this information as well, through their relationship. The coefficients are increased, such as from 0.0096 in baseline real estate value regression to 0.0103, showing the "go with the politician" effect increases. The go with the politician effect is weaker for these transition positions because the probability for interacted firms to later evade land regulations is lower, since the politician will shortly leave office.

Columns (4)-(6) use the subsample composed of only prefecture and provincial party secretaries. The coefficients on *Interacted* are larger as the Party Secretary is the de facto number one boss in their governed region. The relationship between the Party Secretary and Mayor in China is like that between a Chairman and CEO in a company (Xu, 2011). Considering the limited number of listed companies and their large influence on the local economy, the Party Secretary has a strong intention to interact with these companies as well. Since there is only one leader in a prefecture, the prefecture by year fixed effects also absorb the leader by year fixed effects which contain leader's characteristics such as sex, age, education, some of which might affect a leader's incentive. Results for this subsample analysis also alleviate our concerns that leader characteristics might drive our results, that is, for example, a local leader close to retirement has an incentive to cater to firms by granting more lands to them to obtain an after retirement benefit.

Columns (7)-(9) excluded local born politicians, whose hometown is the same as their governed prefecture. Persson and Zhuravskaya (2016) showed behavioral differences between local born politicians and others in China. For example, they provide more public goods and their rise of power has a higher probability of getting support from local elites. Since they have a higher probability to cater to local firms, excluding them might have a bigger coefficient. However, local born politicians can also have the power to control local firms but still be eager for a higher GDP, according to the tournament theory mentioned in the Background section, therefore giving more

land to lure outside firms. The two effects might cancel each other as seen from the relatively constant coefficient of 0.0091 vs 0.0096 in the baseline regression.

Columns (10)-(12) consider only cross province politician rotation. On the one hand, politicians might have interacted with firms within a province. A within province move for politicians will have a lower “go with the politician” effect. On the other hand, politicians who move outside the province might need to cater to local firms more, as their interacted firms have more information or management costs as the distance is larger. Our results seem to support the latter argument by showing smaller coefficients.

In Table 12, Columns (1)-(3) considers a subsample which excludes the list of company subsidiaries’ on land purchases. We conjecture that the subsidiaries might be different from listed companies’ branches as they are independent legal entities and should have somewhat different objective functions with parent companies. Indeed, our results are strengthened by having larger coefficients.

In Columns (4)-(6), we exclude local headquarter firm’s land purchases, which is another important category expected to behave differently from other companies. On the one hand, newly appointed local leaders might favor local firms to get support, which will increase our coefficient after dropping these local firms. On the other hand, local firms might collude with the incumbent local political power, to curb the newly appointed politician’s influence, which will reduce our coefficient after eliminating local firms. Our results seem to support the former with increased coefficients such as 0.0116 in Column (6) compared to 0.0096 from the baseline regression. In Column (7)-(9), we consider *Interacted* to be defined only as a politician’s previous immediate working prefecture’s headquarter firms, or only the firms with an *Interaction Intensity* score of 5. Unsurprisingly, we see that the coefficient becomes the largest bearing value of 0.0154 among all subsample analyses.

In the Appendix Tables A6 and A7, we further differentiated types of land use,

between industrial lands and commercial and residential lands. The latter two types are viewed as one here as they often share similar characteristics, such as, most importantly, the same price, and they are often bundled to be sold together. We see that the “go with the politician” effect for the subsample only consist of industrial lands is much smaller than the effect for the subset consisting only residential and commercial lands, which is understandable as industrial lands relating to industrial firms have a direct impact on the real economy. The regional GDP competition or internal GDP assessment from the guideline of the upper level government, leads to politician prone growth, and consequently less distortion as shown by the smaller coefficients.

In Appendix Table A8, we also tried four kinds of saturated regressions with some variations of our flexible fixed effects. Our results are still highly significant, and the magnitudes for key coefficients are similar with a baseline regression. For example, coefficients for Column (3), fraction value, range from 0.0074 to 0.0113, comparable to the 0.0096 in baseline regression. We view the stability of these estimates as strong evidence that the relationship between our variable of interest, *Interacted*, and the “go with the politician” land purchase, is unlikely to result from problems such as omitted variable bias.

In Appendix Table A9, we rule out the politicians who have worked in Beijing where the central government locates. This group of politician might be special because they are often sent down to local governments to gain experience. They also have a higher possibility to be politically connected to the central government in Beijing. In Appendix Table A10, we rule out firms headquartering in Beijing and Shanghai, not only for political reason as these two municipalities usually have powerful politicians, but also for economic reason as a large fraction of listed firms headquarter in these two locations. We find from both tables that our results are very robust with significant and comparable coefficients with our baseline regressions in Table 4.

6. Further Results

6.1 Heterogeneity Analysis

In this subsection, we turn to a heterogeneity analysis of our baseline results by differentiating key relevant prefecture and firm characteristics. Table 13 shows our subsample analysis results. Most of the groupings are divided by each characteristic's median value if the characteristic is a continuous variable. So observations for the two groups below and above median value under each characteristic, are roughly equal to each other. We only report the results for fraction value dependent variables but we have robust results for the previous alternative dependent variables.

In Table 13, Columns (1) and (2) differentiate prefectures according to their located provinces' institution quality, only available at provincial level, constructed as a marketization index created by Fan, Wang, and Zhu (2011). Consistent with our corruption mechanism, the coefficient for the low institutional quality regions of 0.0145 is almost twice as large as the one for the high institutional quality regions of 0.0088, indicating the "go with the politician" effect is much stronger, in more corrupt regions.

Columns (3) and (4) differentiate firms according to their state ownership status. Interestingly, we found that private firms displayed a stronger "go with the politician" effect than SOEs and the coefficient is twice that for the SOE group. This shows that the corruption effect dominates the traditional SOE effect. Private firms might have a stronger political connection with local government if they bribe or build reciprocal relations with local politicians. We conjecture this is mainly from the "grasp the large, let go of the small" SOE Reform initiated by the Central Government in the late 1990s (see Hsieh and Song (2015) for a specific examination of this reform). Afterwards, even a small local SOE might be part of a conglomerate which is most likely controlled by the Central Government. Central government leaders obtained significant power and control over SOEs through this direct or indirect ownership. In order to improve the performance of Central Government controlled SOEs, the Central Government uses a profitability measure to promote or demote Central Government controlled SOE leaders

(Yang, Wang, and Nie, 2012). Such Central Government controlled SOE leaders usually have higher political rank than the prefecture Party Secretary. For profitability or political faction considerations, SOEs might not follow a local politician's instructions to achieve their political goals, which might explain the smaller coefficient for SOEs.

Columns (5) and (6) show that small firms have a larger coefficient than large firms. There are fewer than ten publicly listed firms in each prefecture. So the small firms are, on average, still much larger than the majority of the firms registered in a prefecture. Usually, large firms are more geographically diverse, which make them less responsive to local politicians' instruction. For example, recently, using Vietnamese and Chinese data, Bai et al. (2017) found that larger firms have a lower bribery expenditure over their revenues.

6.2 Hometown Effect

We did not find firms from the leader's hometown exhibit such a "go with the politician" pattern, by taking advantage of their possible interaction with the leader, after the leader's move. Recent literature provides suggestive evidence that leaders favor their hometown. For example, Hodler and Raschky (2014) showed that after a country's leader took power, his or her hometown region experienced strong nighttime light growth, a proxy for regional economic activity following from Henderson, Storeygard, and Weil (2012). They provided strong evidence of regional favoritism as their paper's title. We repeat our baseline regression with our *Interacted* variable replaced by *Hometown*, indicating whether a firm's headquarter is the same place as the prefecture leader's hometown. The insignificant coefficients on *Hometown* as shown in Table 14 clearly distinguish our results from such regional favoritism argument. Our result might be because most of the leaders are in their 40s and 50s. Local leaders mostly left their hometown for college when they were around 18, the time when the Open Door Policy in China had just commenced, meaning few firms then existed. Our working experience argument makes more sense for interaction

because both the local leader and the then local firms have related economic objectives, that is, for local GDP or the firm to profit, which makes them very likely to collaborate, a key measure in political science literature. Jia, Kudamatsu, and Seim (2015) also showed the importance of co-working experience as a measure of politician connection in China, relative to other measures.

6.2 Anti-Corruption Campaign since 2012

In their seminal paper, Shleifer and Vishny (1993) argue that the secrecy of corruption makes it much more distortionary and costly than taxation, and keeping corruption secret requires keeping down the number of agents involved in giving and receiving bribes. Here, we take advantage of a large scale nationwide anti-corruption campaign initiated by central government since 2012 to test whether the land purchase dispersion among interacted firms increased after 2012 compared to non-interacted firms.

The anti-corruption campaign began after the conclusion of the 18th National Congress of the Communist Party of China in 2012. It is the largest organized one since Communist rule commenced in China. As of 2016, more than 100,000 officials have been indicted for corruption. This large scale exogenous event has been exploited to a large extent, particularly in studying corporate matters, such as Chen and Kung (2019). We first want to investigate the effect of anti-corruption campaign on our baseline result, by adding the interaction term of *Interacted* and a year dummy denoting whether that year is or after 2012, the anti-corruption campaign starting year, with value of 1 if yes and 0 if no, and the dependent variables are still various variants of land amount purchased. Appendix Table A11 demonstrates that anti-corruption campaign generated a somewhat surprising result. Although it shows weakening effect by having the interaction variable's coefficient negative, those coefficients are insignificant.

We then explore a possible channel for our finding that the imperative of secrecy of

corruption might lead land sales to be more concentrated at possibly connected firms after anti-corruption campaign based on theory developed by Shleifer and Vishny (1993). We use the dispersion of various measures of land sales including land parcel number, area, and value for each firm within the same headquarter prefecture. The dispersion measures we adopted, which are our dependent variables, are the standard deviation and the interquartile range (IQR). We believe the latter does a better job in capturing the theoretical implication that under a stricter corruption punishment environment, a prefecture leader would concentrate its business connection to fewer firms so that the top buyers will purchase much more compared to before. Table 15 displays our results showing that the coefficients for the interaction term of *Interacted* and anti-corruption year dummy are positive and significant for the IQR dependent variable in Columns (4)-(6), more consistent with our corruption channel while possibly not supporting the information asymmetry channel.

6.3 Local Firms

Another important category of firms are local headquartered ones. They should be investigation target as well in fostering business government relation. More relatedly to this paper, interacted firms were local firms before. Here, we call local headquartered firms in short as local firms. A natural curiosity is the land purchase effect of being local. One the one hand, being physically close to a politician's working place will give local firms a bigger advantage compared to interacted firms which are located farther away (Giroud, 2013). So local firms might purchase more lands compared to interacted firms. On the other hand, *guanxi* or connection needs time to nurture. Interacted firms have a longer history in interacting with that politician compared to firms with their headquarters in that politician newly governed region. The implication along this line of theory is that interacted firms should have more land deals compared to local firms.

Table 16 shows our results, similarly with our baseline regressions except with *Interacted* replaced by *Local* which takes the value of 1 if headquartering in that

prefecture and 0 otherwise. In Columns (1)-(3), the coefficients on *Local* are significantly positive, and the magnitudes are comparable to the coefficients in our previous baseline regressions, suggesting the above mentioned effects might cancel each other. For example, it was 0.0096 for the fraction of land value purchased over all land value sold for the interacted firms but 0.0193 for the local firms. What's interesting to us are the coefficients on the interaction term in Columns (4)-(6), an estimation of the anti-corruption effect on local firms. The coefficients on the interaction terms are significantly negative, indicating local firms lowered their purchases after 2012, approximately 30% reduction economically, in contrast to the insignificant findings for interacted firms. According to Shleifer and Vishny (1993), this again suggests the imperative of secrecy of corruption leads a politician to utilize his or her previous built connection (interacted firms) rather than an attempt to build new connection (local firms). Another channel is that local firms are more visible compared to interacted firms and they can be more easily becoming investigation target. While we cannot differentiate this argument with the time to build trust one, both of them point to corruption mechanism in explaining our main findings in this paper.

We also ran a similar regression for the discounted price one as the interacted firm dummy being replaced by local firm dummy. With the dependent variable still as unit land price paid by a firm over the average land price within 2 km radius sold in the same year, Appendix Table A12 shows our results that the coefficient on *Local* is economically large, but statistically insignificant, suggesting a more dominant role played by interacted firms compared to local firms in obtaining corruption benefit.

7. Conclusion

In this paper, we took advantage of a unique large scale quasi-random political event generating within firm location variations, frequent local leader turnover to different prefectures in China, to identify firm-politician relations and resultant resource

misallocation. We found that politically interacted firms, defined as firms headquartering in the prefecture which was the politician's previous working location, purchase more land in the politician's newly governed prefecture or province. The average price paid by politically interacted firms was lower than non-interacted firms. This land is also developed by these firms less efficiently from that point on, measured by slower growth of nighttime light intensity. Our baseline regression controls prefecture by year, firm by year, and original province by destination province fixed effects.

Even though politician mobility might serve the Central Government's main goal to reduce regional cronyism after a politician has been consistently working in a prefecture or province for too long, it might also bring a new source of cronyism, a spillover to the new prefecture or province as seen from the "go with the politician" effect, identified in this paper.

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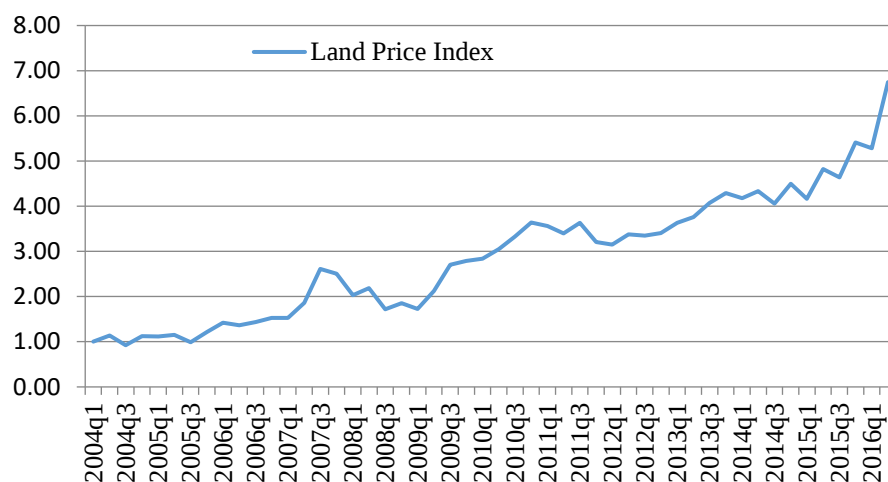
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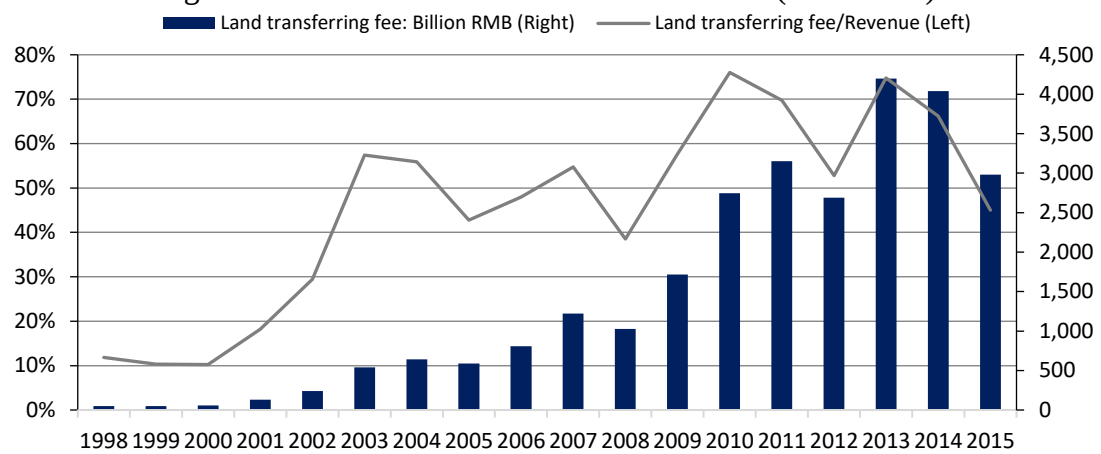
Figure 1- Hedonic Land Price Index (2004-2016)



Source: The hedonic land price data are from Wu, Gyourko, and Deng (2012), downloadable from

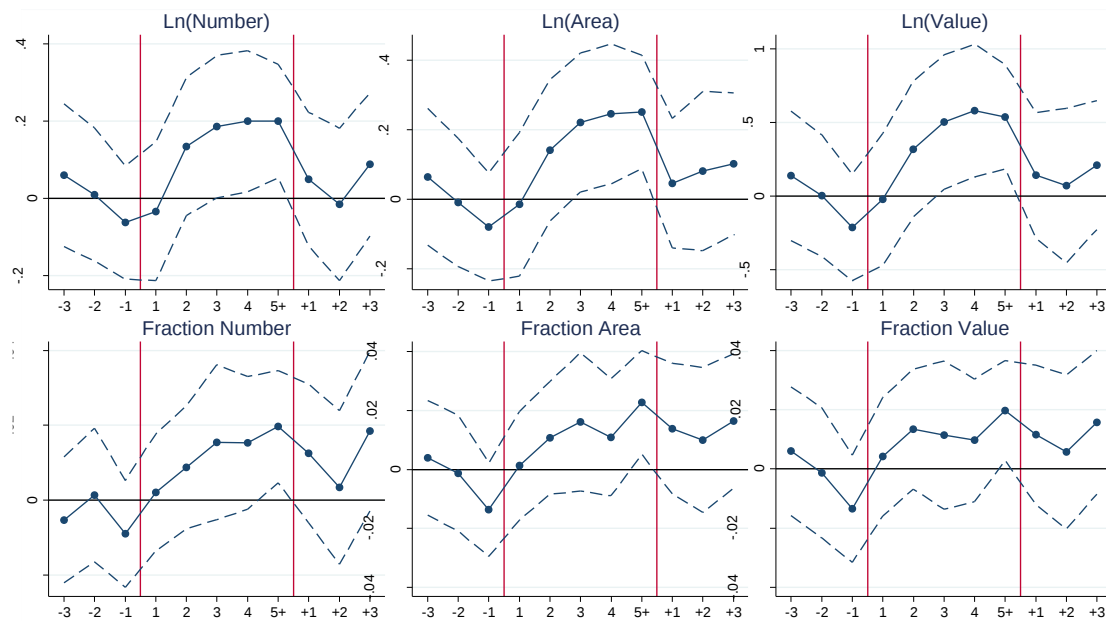
<http://real.wharton.upenn.edu/~gyourko/chineselandpriceindex.html>.

Figure 2: Local Government Revenue Structure (1998-2015)



Source: China Statistic Yearbook for Regional Economy 1998-2015

Figure 3: The Dynamics of a Firm Being Interacted and Non-Interacted



Notes: The figures plot coefficient estimates of dummy variables accounting for the individual three years before a firm becomes interacted (-3, -2, -1), the first individual four years of being an interacted firm (1-4), the fifth and all subsequent years (5+), and the first three years after the end of interaction when a politician re-switches from that prefecture (+1, +2, +3). The blue solid line plots coefficient estimates for each individual variable, and the dashed lines indicate the upper and lower limits of the 95% confidence interval. These estimates stem from baseline regressions with $\ln(\text{Number})$, $\ln(\text{Area})$, $\ln(\text{Value})$, Fraction Number, Fraction Area, and Fraction Value as dependent variables, indicating the land parcel number, area, and value that a firm purchases in a prefecture-year, and the fraction of land parcel number, area, and value that firm purchases over all land number, area, and value sold in that prefecture-year, respectively. For each figure, these dependent variables are regressed on the aforementioned 11 dummy variables and the full set of prefecture-year, firm-year, province-province fixed effects, using annual data for prefectures between 2006 and 2016. Standard errors are adjusted for prefecture clustering. The vertical lines indicate the beginning and the end of Interacted taking value of 1.

Table 1: Summary Statistics of Land Data Obtained by Public Firms

Number of land parcels obtained by public firms	43773
-Industrial lands	19252
-Residential lands	7196
-Commercial lands	11202
-Other lands	6123
Number of public firms that have obtained at least one land parcel	2188
Average number of land parcels obtained by each public firm	20
Number of land parcels obtained by non-local public firms	38259

Table 2: Summary Statistics of Main Variables

Variable	Observations	Mean	Standard Deviation
Number	109076	0.4013	5.4636
Area (Unit: hectare)	109076	1.2982	5.2281
Value (Unit: 10k yuan)	109076	907.7673	4817.4510
Ln(Number+0.01)	109076	-3.7573	1.8975
Ln(Area+0.01)	109076	-3.6653	2.2016
Ln(Value+0.01)	109076	-2.7414	4.3312
Fraction Number	96443	0.0332	0.1143
Fraction Area	96443	0.0307	0.1223
Fraction Value	95974	0.0310	0.1297
Interacted	109076	0.1673	0.3733

Table 3: Turnover Frequency by Province from 2006 to 2016

Province Name	GDP Per Capita in 2016 (yuan)	Turnover Number
Anhui	39561	50
Beijing	118198	4
Chongqing	58502	4
Fujian	74707	33
Gansu	27643	48
Guangdong	74016	70
Guangxi	38027	22
Guizhou	33246	34
Hainan	44347	14
Hebei	43062	50
Heilongjiang	40432	31
Henan	42575	44
Hubei	55665	47
Hunan	46382	39
Jiangsu	96887	27
Jiangxi	40400	62
Jilin	53868	36
Liaoning	50791	49
Inner Mongolia	72064	46
Ningxia	47194	13
Qinghai	43531	23
Shandong	68733	49
Shanghai	116562	4
Shanxi	35532	29
Shaanxi	51015	22
Sichuan	40003	57
Tianjin	115053	5
Xinjiang	40564	36
Xizang	35184	16
Yunnan	31093	55
Zhejiang	84916	36

Source: WIND, Regional Statistical Yearbook, Manual Collection

Table 4: Baseline Results

Dependent variable	(1) ln(Number)	(2) ln(Area)	(3) ln(Value)	(4) Fraction Number	(5) Fraction Area	(6) Fraction Value
Interacted	0.2354*** (0.0363)	0.2947*** (0.0451)	0.5661*** (0.0838)	0.0084*** (0.0023)	0.0080*** (0.0025)	0.0096*** (0.0027)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	96,558	96,558	96,558	84,385	84,385	83,924
R^2	0.2936	0.2798	0.2744	0.2797	0.2052	0.1921

Notes: This table reports the estimated effect of whether a firm and politicians have interacted on the logarithm of the number of land parcels purchased by that firm in that prefecture-year (column 1), the logarithm of the land areas purchased by that firm in that prefecture-year (column 2), the logarithm of the land value purchased by that firm in that prefecture-year (column 3), the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year (column 4), the fraction of land areas purchased by that firm over all the land areas sold in that prefecture-year (column 5), the fraction of land values sold in that prefecture-year (column 6). The variable *Interacted* denotes whether a firm's headquarters in that prefecture-year politician's previous working prefecture and is equal to 1 if yes, 0 otherwise. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where the destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 5: Pre-Trends

Dependent variable	(1) ln(Number)	(2) ln(Area)	(3) ln(Value)	(4) Fraction Number	(5) Fraction Area	(6) Fraction Value
Indicator for three years before being interacted	0.0294 (0.1018)	0.0664 (0.1232)	0.0338 (0.2420)	0.0030 (0.0067)	0.0110 (0.0083)	0.0052 (0.0086)
Indicator for two years before being interacted	-0.0727 (0.0762)	-0.0921 (0.0903)	-0.1486 (0.1770)	-0.0029 (0.0053)	-0.0067 (0.0058)	-0.0010 (0.0063)
Indicator for one year before being interacted	-0.0061 (0.0703)	-0.0108 (0.0842)	-0.0881 (0.1616)	0.0014 (0.0050)	-0.0015 (0.0053)	-0.0034 (0.0055)
Interacted	0.2321*** (0.0379)	0.2910*** (0.0470)	0.5538*** (0.0875)	0.0084*** (0.0024)	0.0079*** (0.0026)	0.0095*** (0.0028)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	96,558	96,558	96,558	84,385	84,385	83,924
R^2	0.2936	0.2799	0.2744	0.2797	0.2052	0.1921
Joint P-value of pre-trends	0.780	0.683	0.828	0.887	0.348	0.859

Notes: This table reports the estimated effect of whether firms and politicians have interacted on firm's land purchase in that prefecture-year by adding three pre-trends before *Interacted* to baseline regression, specifically, the logarithm of the number of land parcels purchased by that firm in that prefecture-year (column 1), the logarithm of the land areas purchased by that firm in that prefecture-year (column 2), the logarithm of the land value purchased by that firm in that prefecture-year (column 3), the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year (column 4), the fraction of the land areas purchased by that firm over all the land areas sold in that prefecture-year (column 5), the fraction of the land values sold in that prefecture-year (column 6). The variable *Interacted* denotes whether firms are located in that prefecture-year prefecture leaders' previous working prefecture and is equal to 1 if yes, 0 otherwise. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one prefecture-year locates and origin province is the one firm headquarters. Indicator for one, two, three years before being interacted is a dummy variable, taking value of 1 for one, two, and three years before *Interacted* first time switching from 0 to 1, and 0 otherwise. The last row shows joint P-value of pre-trends, the three indicators for one, two, and three years before being interacted. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 6: Full Sample with All Firm and Prefecture Pairs

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	Fraction Number	Fraction Area	Fraction Value	Fraction Number	Fraction Area	Fraction Value
Indicator for three years before being interacted				0.0001 (0.0002)	0.0003 (0.0003)	0.0003 (0.0003)
Indicator for two years before being interacted				0.0001 (0.0002)	0.0002 (0.0003)	0.0003 (0.0002)
Indicator for one year before being interacted				0.0002 (0.0002)	0.0004 (0.0002)	0.0001 (0.0002)
Interacted	0.0014*** (0.0002)	0.0021*** (0.0002)	0.0020*** (0.0002)	0.0015*** (0.0002)	0.0021*** (0.0002)	0.0020*** (0.0002)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	7,014,726	7,014,726	6,938,146	7,014,726	7,014,726	6,938,146
R^2	0.1838	0.0566	0.0594	0.1838	0.0566	0.0594
Joint P-value of pre-trends				0.530	0.282	0.466

Notes: This table reports the estimated effect of whether firms and politicians have interacted on firm's land purchase in that prefecture-year in the sample with all firm and prefecture pairs including even prefectures and years a firm never purchased land, specifically, the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year (column 1), the fraction of the land areas purchased by that firm over all the land areas sold in that prefecture-year (column 2), the fraction of the land values sold in that prefecture-year (column 3). The variable Interacted denotes whether firms located in that prefecture-year prefecture leaders' previous working prefecture and is equal to 1 if yes, 0 otherwise. Columns (4)-(6) add pre-trends to Columns (1)-(3) respectively. Specifically, indicator for one, two, three years before being interacted is a dummy variable, taking value of 1 for one, two, and three years before Interacted first time switching from 0 to 1, and 0 otherwise. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one prefecture-year locates and origin province is the one firm headquarters. The last row shows joint P-value of pre-trends, the three indicators for one, two, and three years before being interacted. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 7: Extension of Baseline - Interaction Intensity Measured by Co-Working Sequence between Politicians and Firms

Dependent variable	(1) ln(Number)	(2) ln(Area)	(3) ln(Value)	(4) Fraction Number	(5) Fraction Area	(6) Fraction Value
Interaction Intensity (Co-Working Sequence)	0.0735*** (0.0096)	0.0935*** (0.0120)	0.1667*** (0.0220)	0.0031*** (0.0006)	0.0032*** (0.0007)	0.0033*** (0.0008)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	96,558	96,558	96,558	84,385	84,385	83,924
R ²	0.2939	0.2803	0.2747	0.2799	0.2054	0.1923

Notes: In this table, we report the estimated effect of firm's previous interaction intensity with a local leader on the firm's land purchase in that leader's newly governed region. *Interaction Intensity* is an extension of *Interacted*, which takes values from 0 to 5. Five indicates closest case where a firm's headquarters is located in a local leader's last working region, right before their move. One indicates the farthest case where a firm's headquarters is located in a local leader's initial working region. The unit of analysis is firm-prefecture-year. Dependent variables in Columns (1) to (3) are a logarithm of a firm's purchase of land parcel number, total area, and total value in a prefecture. Dependent variables in Columns (4) to (6) are fractions of a firm's purchase of land parcel number, total area, and total value over the aggregate land parcel number, area, and value in a prefecture. Robust standard errors clustered at the prefecture level are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 8: Interacted Intensity as Measured by Years Politician and Firm had Co-working

Dependent variable	(1) ln(Number)	(2) ln(Area)	(3) ln(Value)	(4) Fraction Number	(5) Fraction Area	(6) Fraction Value
Interaction Intensity (Year)	0.0459*** (0.0075)	0.0574*** (0.0092)	0.1116*** (0.0167)	0.0019*** (0.0004)	0.0021*** (0.0005)	0.0022*** (0.0005)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	94,243	94,243	94,243	82,706	82,706	82,264
R^2	0.2917	0.2771	0.2722	0.2798	0.2050	0.1922

Notes: This table reports the estimated effect of how many years firms and politicians have interacted on the logarithm of the number of land parcels purchased by that firm in that prefecture-year (column 1), the logarithm of the land areas purchased by that firm in that prefecture-year (column 2), the logarithm of the land value purchased by that firm in that prefecture-year (column 3), the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year (column 4), the fraction of the number of land areas purchased by that firm over all the land areas sold in that prefecture-year (column 5), the fraction of the number of land values sold in that prefecture-year (column 6). The variable *Interaction Intensity (Year)* denotes how many years politicians had previously worked in firm's headquarter prefecture or province. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 9: Interacted and Higher Interaction Intensity Firms Buy Land Cheaper

Dependent variable	(1)	(2)	(3)
	Unit Price / Average Price within a 2KM Radius		
Interacted	-0.5452** (0.2373)		
Interaction Intensity (Co-Working Sequence)		-0.2106** (0.0904)	
Interaction Intensity (Year)			-0.1653** (0.0740)
Prefecture-year fixed effects	Y	Y	Y
Firm-year fixed effects	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y
Observations	13,989	13,989	13,391
R^2	0.3751	0.3755	0.3915

Notes: This table reports the estimated effect of Interacted or Interaction Intensity on land parcel price a firm pays. The dependent variable is land unit price a firm pays over 2km surrounding land price around that land. In Column (1), the independent variable is Interacted, which is equal to 1 if a firm headquarters in local leader's previous working prefectures, or provinces corresponding to provincial leaders, and 0 otherwise. Interaction Intensity (Co-Working Sequence) is an extension of Interacted, and takes values from 0 to 5. Five indicates closest case where a firm's headquarter locates in local leader's last working region, right before his or her move. One indicates farthest case where a firm's headquarter locates in local leader's initial working region. The variable Interaction Intensity (Year) denotes how many years politicians had previously worked in firm's headquarter prefecture or province. The unit of analysis is firm-prefecture-year. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 10: Land Usage Efficiency is Lower for Interacted and Higher Interaction Intensity Firms after Purchase

Dependent variable	(1)	(2)	(3)
	ln(Nighttime Light Intensity + 0.01)		
Post Deal	-0.0455*** (0.0083)	-0.0463*** (0.0082)	-0.0470*** (0.0082)
Post Deal × Interacted	-0.0576** (0.0231)		
Post Deal × Interaction Intensity (Co-Working Sequence)		-0.0135** (0.0059)	
Post Deal × Interaction Intensity (Year)			-0.0111** (0.0051)
Land parcel fixed effects	Y	Y	Y
Firm-year fixed effects	Y	Y	Y
Prefecture-year fixed effects	Y	Y	Y
Observations	266,070	266,070	265,956
R ²	0.8994	0.8994	0.8994

Notes: This table reports the estimated effect of Interacted or Interaction Intensity on land usage efficiency. The unit of analysis is land parcel-prefecture-year. The dependent variable is ln(Nighttime Light Intensity+0.01), our proxy for land usage efficiency. Post Deal is a dummy variable, taking value of 1 after a land parcel sale, and 0 otherwise. In Column (1), the independent variable is Interacted, which is equal to 1 if a firm headquarters in local leader's previous working prefectures, or provinces corresponding to provincial leaders, and 0 otherwise. Interaction Intensity (Co-Working Sequence) is an extension of Interacted, and takes values from 0 to 5. Five indicates closest case where a firm's headquarter locates in local leader's last working region, right before his or her move. One indicates farthest case where a firm's headquarter locates in local leader's initial working region. The variable Interaction Intensity (Year) denotes how many years politicians had previously worked in firm's headquarter prefecture or province. All regressions control prefecture by year fixed effects, firm by year fixed effects, and land parcel fixed effect. Robust standard errors clustered at the prefecture level are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 11: Robustness Checks A

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Excluding Term of Office < 1 year			Considering Only Secretaries			Exclude Local Born Leaders			Considering Only Cross-Province Transfer		
Dependent variable	Fraction Number	Fraction Area	Fraction Value	Fraction Number	Fraction Area	Fraction Value	Fraction Number	Fraction Area	Fraction Value	Fraction Number	Fraction Area	Fraction Value
Interacted	0.0081*** (0.0023)	0.0083*** (0.0024)	0.0103*** (0.0027)	0.0065** (0.0026)	0.0098*** (0.0029)	0.0105*** (0.0031)	0.0066*** (0.0022)	0.0075*** (0.0024)	0.0091*** (0.0027)	0.0062*** (0.0024)	0.0052** (0.0025)	0.0061** (0.0026)
Prefecture-year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm-year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Destination province- origin province FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Tenure FE							Y	Y	Y			
Observations	84,385	84,385	83,924	84,385	83,924	84,385	83,924	84,385	84,385	84,385	84,385	83,924
R ²	0.2797	0.2052	0.1922	0.2052	0.1921	0.2796	0.1921	0.2796	0.2051	0.2797	0.2052	0.1922

Notes: “Fraction Number” is the number of land parcels that a firm obtains in a prefecture-year as a fraction of the total number of all land parcels sold in that prefecture-year. “Fraction Area” is the area of land parcels that a firm obtains in a prefecture-year as a fraction of the total area of all the land parcels sold in that prefecture-year. “Fraction Value” is the value of land parcels that a firm obtains in a prefecture-year as a fraction of the total value of all the land parcels sold in that prefecture-year. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 12: Robustness Checks B

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Exclude Subsidiaries' Land Purchase			Exclude Local Firm Land Purchase			Immediate Working History		
Dependent variable	Fraction Number	Fraction Area	Fraction Value	Fraction Number	Fraction Area	Fraction Value	Fraction Number	Fraction Area	Fraction Value
Interacted	0.0086*** (0.0025)	0.0093** (0.0028)	0.0100*** (0.0030)	0.0050** (0.0023)	0.0067*** (0.0026)	0.0116*** (0.0027)	0.0157** (0.0032)	0.0167*** (0.0037)	0.0154*** (0.0040)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	79,483	79,483	79,027	74,796	74,796	74,412	84,385	84,385	83,924
R ²	0.2844	0.2053	0.1933	0.2696	0.1781	0.1710	0.2799	0.2054	0.1922

Notes: This table reports the estimated effect of whether firm and politicians have interacted on the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year, the fraction of land areas purchased by that firm over all the land areas sold in that prefecture-year, the fraction of land values sold in that prefecture-year. The variable Interacted denotes whether a firm headquarters in that prefecture-year politician's previous working prefecture and is equal to 1 if yes, 0 otherwise. Columns (1)-(3) exclude listed company subsidiary firms' land purchases. Columns (4)-(6) exclude local firm's land purchases. Columns (7)-(9) define Interacted only for firms headquarter in politician's very recent preceding working prefecture. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 13: Heterogeneity Analysis - Institution Quality, SOE Status, and Firm Size

	(1)	(2)	(3)	(4)	(5)	(6)
	Low Institution Quality	High Institution Quality	Non-SOE	SOE	Small Firms	Large Firms
Dependent variable	Fraction Value	Fraction Value	Fraction Value	Fraction Value	Fraction Value	Fraction Value
Interacted	0.0145*** (0.0046)	0.0088*** (0.0029)	0.0170*** (0.0052)	0.0073* * (0.0030)	0.0118*** (0.0035)	0.0084** (0.0034)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	33,255	50,418	24,299	59,397	34,342	49,403
R^2	0.2595	0.2339	0.3399	0.2145	0.2919	0.2305

Notes: This table reports the estimated effect of whether firm and politicians have interacted on the fraction of land parcel values purchased by that firm over all the land parcel values sold in that prefecture-year. The variable Interacted denotes whether a firm headquarters in that prefecture-year politician's previous working prefecture and is equal to 1 if yes, 0 otherwise. Columns (1) and (2) differentiate provinces according to their institutional quality. Columns (3) and (4) differentiate firms according to their ownership status. Columns (5) and (6) differentiate firms according to their size. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 14: Hometown Effect as a Potential Source of Cronyism

Dependent variable	(1) ln(Number)	(2) ln(Area)	(3) ln(Value)	(4) Fraction Number	(5) Fraction Area	(6) Fraction Value
Hometown	-0.0298 (0.0554)	-0.0237 (0.0711)	0.0287 (0.1333)	-0.0009 (0.0038)	0.0009 (0.0047)	0.0036 (0.0049)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	96,558	96,558	96,558	84,385	84,385	83,924
R^2	0.2930	0.2791	0.2737	0.2795	0.2050	0.1919

Notes: This table reports the estimated effect of whether firms headquarter in the hometown prefecture of prefecture leaders on the logarithm of the number of land parcels purchased by that firm in that prefecture-year (column 1), the logarithm of the land areas purchased by that firm in that prefecture-year (column 2), the logarithm of the land value purchased by that firm in that prefecture-year (column 3), the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year (column 4), the fraction of the number of land areas purchased by that firm over all the land areas sold in that prefecture-year (column 5), the fraction of the number of land values sold in that prefecture-year (column 6). The variable Hometown denotes whether firms headquarter in that prefecture-year prefecture leaders' hometown prefecture and is equal to 1 if yes, 0 otherwise. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 15: Anti-Corruption Campaign and the Secrecy of Corruption

Dependent variable	(1) ln(Number Standard Deviation)	(2) ln(Area Standard Deviation)	(3) ln(Value Standard Deviation)	(5) ln(Number Interquartile)	(6) ln(Area Interquartile)	(7) ln(Value Interquartile)
Interacted	0.4362*** (0.1241)	0.6433*** (0.1723)	1.4356*** (0.3300)	0.3764*** (0.0687)	0.4816*** (0.0880)	0.9273*** (0.1637)
Interacted * (Year>=2012)	0.1739 (0.1405)	0.1277 (0.1894)	0.5761 (0.3615)	0.1955** (0.0817)	0.2154** (0.1014)	0.5373*** (0.1952)
Origin prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Destination prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	13,398	13,398	13,398	57,387	57,387	57,387
R^2	0.5197	0.4782	0.4961	0.3374	0.2897	0.3026

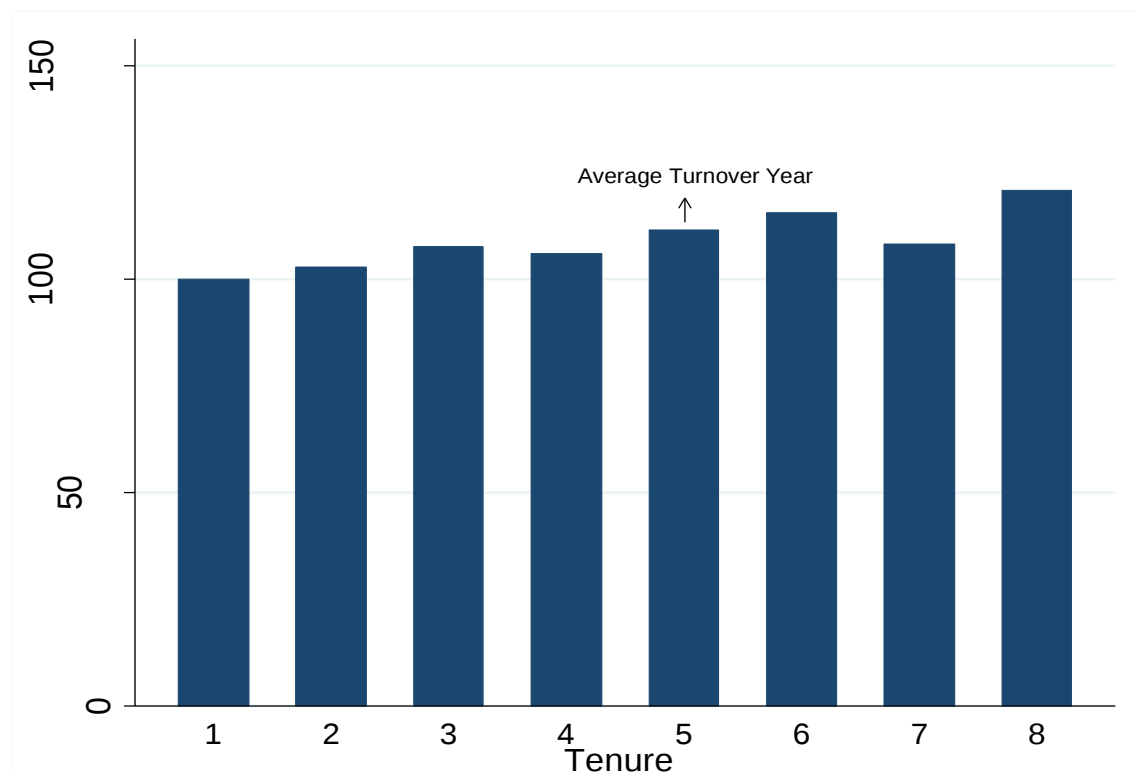
Notes: The estimation in this table is at origin prefecture by destination prefecture by year level. This table reports the estimated effect of whether the group of firms headquartering in the same prefecture and a politician have interacted and its interaction with a dummy variable denoting whether year is or after 2012 (the anti-corruption starting year) on the logarithm of the standard deviation of the number of land parcels purchased by that group of firms in that prefecture-year (column 1), the logarithm of the standard deviation of land areas purchased by that group of firms in that prefecture-year (column 2), the logarithm of the standard deviation of the land value purchased by that group of firms in that prefecture-year (column 3), the logarithm of the interquartile range of the fraction of the number of land parcels purchased by that group of firms over all the land parcels sold in that prefecture-year (column 4), the logarithm of the interquartile range of the fraction of land areas purchased by that group of firms over all the land areas sold in that prefecture-year (column 5), the logarithm of the interquartile range of the fraction of land values purchased by that group of firms over all the land values sold in that prefecture-year (column 6). The variable Interacted denotes whether a firm's headquarters in that prefecture-year politician's previous working prefecture and is equal to 1 if yes, 0 otherwise. 1(Year>=2012) is a dummy variable and is equal to 1 if year is or after 2012, 0 otherwise. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where the destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table 16: The Effect of Local Firms and Anti-Corruption Campaign

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	Fraction Number	Fraction Area	Fraction Value	Fraction Number	Fraction Area	Fraction Value
Local	0.0208*** (0.0033)	0.0228*** (0.0041)	0.0193*** (0.0044)	0.0245*** (0.0039)	0.0279*** (0.0048)	0.0229*** (0.0050)
Local * 1(Year>=2012)				-0.0073** (0.0031)	-0.0101*** (0.0036)	-0.0071** (0.0036)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	84,385	84,385	83,924	84,385	84,385	83,924
R ²	0.2803	0.2059	0.1925	0.2804	0.2060	0.1925

Notes: This table reports the estimated effect of whether a firm is local on the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year (column 1), the fraction of land areas purchased by that firm over all the land areas sold in that prefecture-year (column 2), the fraction of land values sold in that prefecture-year (column 3). Columns (4)-(6) correspond to Columns (1)-(3) with the interaction term of Local and anti-corruption year dummy added. The variable Local denotes whether a firm's headquarter is in that prefecture-year and is equal to 1 if yes, 0 otherwise. 1(Year>=2012) is a dummy variable and is equal to 1 for year is or after 2012 and 0 otherwise. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where the destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

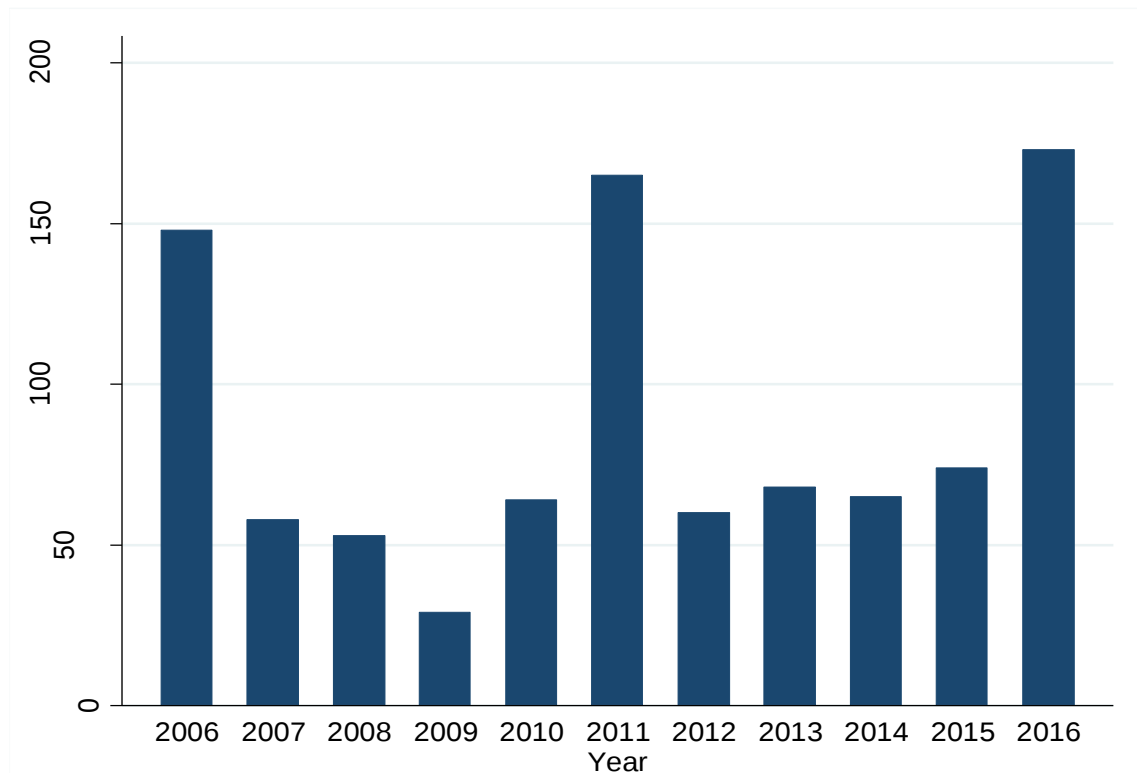
Figure A1: Land Area by Leader's Tenure



Source: Ministry of Land and Resources, Regional Statistical Yearbooks, and authors' own calculation.

Notes: This Figure displays land area by prefecture leader's tenure. Total land area sold in leader's first year is set to 100 for normalization. The stable pattern suggests land quota change should not a driver for our results.

Figure A2: Leader Turnover Number Distribution by Year



Source: China Prefecture and Provincial Statistical Yearbook, various years

Table A1: Variable Definition and Source

Variable	Definition	Source
Number	Number of land parcels purchased for a firm in a prefecture year.	Ministry of Land and Resources and authors' own calculation
Area	Total area of land parcels purchased for a firm in a prefecture year.	Ministry of Land and Resources and authors' own calculation
Value	Total value of land parcels purchased for a firm in a prefecture year.	Ministry of Land and Resources and authors' own calculation
Fraction Number	Fraction of land parcel number purchased for a firm in a prefecture year over all the land parcels sold to all the firms in a prefecture year.	Ministry of Land and Resources and authors' own calculation
Fraction Area	Fraction of land parcel area purchased for a firm in a prefecture year over all the land parcels sold to all the firms in a prefecture year.	Ministry of Land and Resources and authors' own calculation
Fraction Value	Fraction of land parcel area purchased for a firm in a prefecture year over all the land parcels sold to all the firms in a prefecture year.	Ministry of Land and Resources and authors' own calculation
Interacted	Dummy variable. =1 if a firm headquarters in current prefecture leader's previous working prefectures.	WIND and hand collected

Table A2: Group Difference between Interacted and Non-Interacted Firms

	(1)	(2)	(3)	(4)
	Interacted=0	Interacted=1	Difference	Conditional Difference
TFP	-0.0132 (0.0045)	0.0131 (0.0028)	0.0263*** (0.0052)	0.0231*** (0.0049)
ROA	0.0368 (0.0010)	0.0417 (0.0005)	0.0049*** (0.0010)	0.0035*** (0.0010)
ROE	0.0659 (0.0024)	0.0746 (0.0013)	0.0086*** (0.0025)	0.0056** (0.0024)
Firm Age	15.2100 (0.0740)	15.1100 (0.0486)	-0.1040 (0.0890)	0.0655 (0.0733)
SOE	0.3950 (0.0076)	0.5380 (0.0051)	0.1430*** (0.0093)	0.0977*** (0.0070)
Loan / Assets	0.2200 (0.0031)	0.2130 (0.0020)	-0.0072** (0.0036)	-0.0035 (0.0033)
ln(Assets)	21.6600 (0.0179)	22.2000 (0.0135)	0.5420*** (0.0239)	0.3660*** (0.0184)

Notes: This table reports the difference and conditional difference between interacted and non-interacted firms. These examined characteristics are key ones in existing literature. Columns (1) and (2) report the mean and standard deviation for interacted and non-interacted firms respectively. Interacted denotes whether firms headquarter in that prefecture-year politician's previous working prefecture and is equal to 1 if yes, 0 otherwise. Column (3) reports the mean differences for these two groups. Column (4) reports the conditional mean differences for these two groups conditional on prefecture and year fixed effects. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A3: Alternative Clustering Strategies

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)
	Clustering level: prefecture-year			Clustering level: province		
	Fraction Number	Fraction Area	Fraction Value	Fraction Number	Fraction Area	Fraction Value
Interacted	0.0082*** (0.0019)	0.0085*** (0.0021)	0.0104*** (0.0023)	0.0082*** (0.0022)	0.0085*** (0.0023)	0.0104*** (0.0022)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	84,385	84,385	83,924	84,385	84,385	83,924
R^2	0.2797	0.2052	0.1922	0.2797	0.2052	0.1922

Notes: This table reports the estimated effect of whether a firm and politicians have interacted on the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year, the fraction of land areas purchased by that firm over all the land areas sold in that prefecture-year, the fraction of land values sold in that prefecture-year. Robust standard errors clustered at the prefecture by year level are reported in parentheses in Columns (1)-(3). Robust standard errors clustered at the province level are reported in parentheses in Columns (4)-(6). The variable Interacted denotes whether a firm's headquarters in that prefecture-year politician's previous working prefecture and is equal to 1 if yes, 0 otherwise. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where the destination province is the one prefecture-year locates and origin province is the one firm headquarters. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A4: Land Usage Efficiency Test by Assuming Pre-Purchase Light as Zero

Dependent variable	(1) ln(Nighttime Light Intensity + 0.01)	(2)	(3)
Interacted Land	-0.1094*** (0.0104)		
Interaction Intensity of Interacted Land (Co-Working Sequence)		-0.0144*** (0.0030)	
Interaction Intensity of Interacted Land (Year)			-0.0173*** (0.0023)
Prefecture-year fixed effects	Y	Y	Y
Firm-year fixed effects	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y
Observations	268,535	268,535	268,344
R ²	0.4074	0.4072	0.4075

Notes: This table reports the estimated effect of Interacted or Interaction Intensity on land usage efficiency by assuming light intensity as zero before being sold. The unit of analysis is land parcel-prefecture-year. The dependent variable is $\ln(\text{Nighttime Light Intensity} + 0.01)$, our proxy for land usage efficiency. In Column (1), the independent variable is Interacted, which is equal to 1 if a firm headquarters in local leader's previous working prefectures, or provinces corresponding to provincial leaders, and 0 otherwise. Interaction Intensity (Co-Working Sequence) is an extension of Interacted, and takes values from 0 to 5. Five indicates closest case where a firm's headquarter locates in local leader's last working region, right before his or her move. One indicates farthest case where a firm's headquarter locates in local leader's initial working region. The variable Interaction Intensity (Year) denotes how many years politicians had previously worked in firm's headquarter prefecture or province. All regressions control prefecture by year fixed effects, firm by year fixed effects, and land parcel fixed effect. Robust standard errors clustered at the prefecture level are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table A5: The High Management Cost Channel for Lower Light Growth

Dependent variable	(1) ln(Night Light Intensity + 0.01)
Post Deal	-0.0697** (0.0333)
Post Deal * Remote	0.0234 (0.0353)
Land parcel fixed effects	Y
Firm-year fixed effects	Y
Prefecture-year fixed effects	Y
Observations	266,070
R^2	0.8994

Note: This table tests whether higher management cost for a firm leads to lower land usage efficiency. The unit of analysis is land parcel-city-year. The dependent variable is $\ln(\text{nighttime light intensity} + 0.01)$, our proxy for land usage efficiency. Post Deal is a dummy variable, taking value of 1 after a land parcel sale, and 0 otherwise. The independent variable is Interacted, which is equal to 1 if a firm headquarters in local leader's previous working cities, or provinces corresponding to provincial leaders, and 0 otherwise. Land parcel locating out of a firm's headquarter province is a proxy for higher management cost. Remote is a dummy variable and is equal to 1 for out of province land parcel, and 0 otherwise. All regressions control city by year fixed effects, firm by year fixed effects, and land parcel fixed effect. Robust standard errors clustered at firm level are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table A6: Firm Entry

Dependent variable	(1)	(2)	(3)
		Entry	
Interacted	0.2920*** (0.0125)		
Interaction Intensity (Co-Working Sequence)		0.0735*** (0.0033)	
Interaction Intensity (Year)			0.0506*** (0.0030)
Prefecture-year fixed effects	Y	Y	Y
Firm-year fixed effects	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y
Observations	96,558	96,558	94,243
R ²	0.3388	0.3379	0.3173

Notes: This table reports the estimated effect of Interacted or Interaction Intensity on firm entry in terms of land purchase in a prefecture. The dependent variable is firm entry in a prefecture, a dummy variable which takes value of 1 after a firm purchases a land parcel until politician turnover in that prefecture year, and 0 otherwise. In Column (1), the independent variable is Interacted, which is equal to 1 if a firm headquarters in local leader's previous working prefectures, or provinces corresponding to provincial leaders, and 0 otherwise. Interaction Intensity (Co-Working Sequence) is an extension of Interacted, and takes values from 0 to 5. Five indicates closest case where a firm's headquarter locates in local leader's last working region, right before his or her move. One indicates farthest case where a firm's headquarter locates in local leader's initial working region. The variable Interaction Intensity (Year) denotes how many years politicians had previously worked in firm's headquarter prefecture or province. The unit of analysis is firm-prefecture-year. Robust standard errors clustered at the prefecture level are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table A7: Baseline Regression with Industrial Lands Only

Dependent variable	(1) ln(Number)	(2) ln(Area)	(3) ln(Value)	(4) Fraction Number	(5) Fraction Area	(6) Fraction Value
Interacted	0.1421*** (0.0387)	0.1995*** (0.0488)	0.3383*** (0.0840)	0.0076** (0.0038)	0.0064* (0.0034)	0.0088** (0.0043)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	63,052	63,052	63,052	50,967	50,967	49,716
R^2	0.2898	0.2977	0.2832	0.2602	0.2541	0.2497

Notes: This table reports the estimated effect for a subsample with only industrial lands of whether firm and politicians have interacted on the logarithm of the number of land parcels purchased by that firm in that prefecture-year (column 1), the logarithm of the land areas purchased by that firm in that prefecture-year (column 2), the logarithm of the land value purchased by that firm in that prefecture-year (column 3), the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year (column 4), the fraction of the number of land areas purchased by that firm over all the land areas sold in that prefecture-year (column 5), the fraction of the number of land values sold in that prefecture-year (column 6). The variable Interacted denotes whether firms located in that prefecture-year prefecture leaders' previous working prefecture and is equal to 1 if yes, 0 otherwise. All regressions controlled prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A8: Baseline Regression with Commercial and Residential Lands Only

Dependent Variable	(1) ln(Number)	(2) ln(Area)	(3) ln(Value)	(4) Fraction Number	(5) Fraction Area	(6) Fraction Value
Interacted	0.1792*** (0.0459)	0.2135*** (0.0519)	0.4951*** (0.1163)	0.0153*** (0.0056)	0.0158** (0.0061)	0.0163*** (0.0062)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	44,154	44,154	44,154	35,789	35,789	35,789
R^2	0.3375	0.3208	0.3218	0.3123	0.2304	0.2146

Notes: This table reports the estimated effect for a subsample with only commercial and residential lands of whether firm and politicians have interacted on the logarithm of the number of land parcels purchased by that firm in that prefecture-year (column 1), the logarithm of the land areas purchased by that firm in that prefecture-year (column 2), the logarithm of the land value purchased by that firm in that prefecture-year (column 3), the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year (column 4), the fraction of the number of land areas purchased by that firm over all the land areas sold in that prefecture-year (column 5), the fraction of the number of land values sold in that prefecture-year (column 6). The variable Interacted denotes whether firms located in that prefecture-year prefecture leaders' previous working prefecture and is equal to 1 if yes, 0 otherwise. All regressions controlled prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A9: Robustness of the Saturated Regression

Dependent variable	(1) Fraction Number	(2) Fraction Area	(3) Fraction Value
Panel A			
Interacted	0.0052*** (0.0016)	0.0058*** (0.0018)	0.0074*** (0.0020)
Prefecture fixed effects	Y	Y	Y
Firm fixed effects	Y	Y	Y
Year fixed effects	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y
Observations	96,436	96,436	95,968
R-squared	0.2051	0.1135	0.1111
Panel B			
Interacted	0.0071*** (0.0021)	0.0076*** (0.0023)	0.0093*** (0.0025)
Prefecture fixed effects	Y	Y	Y
Firm-year fixed effects	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y
Observations	84,390	84,390	83,929
R-squared	0.2772	0.1973	0.1874
Panel C			
Interacted	0.0058*** (0.0018)	0.0062*** (0.0020)	0.0082*** (0.0022)
Prefecture-year fixed effects	Y	Y	Y
Firm fixed effects	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y
Observations	96,431	96,431	95,963
R-squared	0.2021	0.1135	0.1092
Panel D			
Interacted	0.0083*** (0.0025)	0.0091*** (0.0027)	0.0113*** (0.0029)
Prefecture-year fixed effects	Y	Y	Y
Firm-year fixed effects	Y	Y	Y
Origin province-destination province-year fixed effects	Y	Y	Y
Observations	82,685	82,685	82,218
R ²	0.3235	0.2590	0.2455

Notes: This table reports the estimated effect of whether firm and politicians have interacted, using baseline regression with alternative sets of dummies as controls, on the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year, the fraction of land areas purchased by that firm over all the land areas sold in that prefecture-year, the fraction of land values sold in that prefecture-year. The variable Interacted denotes whether a firm headquarters in that prefecture-year politician's previous

working prefecture and is equal to 1 if yes, 0 otherwise. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A10: Baseline Results without Politicians who have worked in Beijing

Dependent variable	(1) Fraction Number	(2) Fraction Area	(3) Fraction Value
Interacted	0.0092*** (0.0023)	0.0089*** (0.0025)	0.0108*** (0.0028)
Prefecture-year fixed effects	Y	Y	Y
Firm-year fixed effects	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y
Observations	84,385	84,385	83,924
R^2	0.2797	0.2052	0.1922

Notes: This table reports the estimated effect of whether firm and politicians have interacted on the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that city-year (column 4), the fraction of land areas purchased by that firm over all the land areas sold in that city-year (column 5), the fraction of land values sold in that city-year (column 6), for the subsample of politicians without experience working in Beijing where the central government locates. The variable Interacted denotes whether a firm headquarters in that city-year politician's previous working city and is equal to 1 if yes, 0 otherwise. All regressions control city by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one city-year locates and origin province is the one firm headquarters. Robust standard errors clustered at firm level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A11: Baseline Results without Firms Headquartering in Beijing or Shanghai

Dependent variable	(1) Fraction Number	(2) Fraction Area	(3) Fraction Value
Interacted	0.0118*** (0.0024)	0.0133*** (0.0031)	0.0138*** (0.0033)
Prefecture-year fixed effects	Y	Y	Y
Firm-year fixed effects	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y
Observations	59,203	59,203	58,911
R^2	0.2492	0.2509	0.2342

Notes: This table reports the estimated effect of whether firm and politicians have interacted on the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that city-year (column 1), the fraction of land areas purchased by that firm over all the land areas sold in that city-year (column 2), the fraction of land values sold in that city-year (column 3), for the subsample of firms without their headquarters in Beijing or Shanghai. The variable Interacted denotes whether a firm headquarters in that city-year politician's previous working city and is equal to 1 if yes, 0 otherwise. All regressions control city by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where destination province is the one city-year locates and origin province is the one firm headquarters. Robust standard errors clustered at firm level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A12: The Anti-Corruption Campaign's Effect on Baseline Results

Dependent variable	(1) ln(Number)	(2) ln(Area)	(3) ln(Value)	(4) Fraction Number	(5) Fraction Area	(6) Fraction Value
Interacted	0.2441*** (0.0405)	0.3126*** (0.0507)	0.5812*** (0.0926)	0.0106*** (0.0028)	0.0112*** (0.0033)	0.0114*** (0.0034)
Interacted × 1(Year>=2012)	-0.0391 (0.0498)	-0.0595 (0.0587)	-0.0528 (0.1114)	-0.0046 (0.0030)	-0.0050 (0.0034)	-0.0019 (0.0037)
Prefecture-year fixed effects	Y	Y	Y	Y	Y	Y
Firm-year fixed effects	Y	Y	Y	Y	Y	Y
Origin province-destination province fixed effects	Y	Y	Y	Y	Y	Y
Observations	96,558	96,558	96,558	84,385	84,385	83,924
R ²	0.2936	0.2798	0.2744	0.2797	0.2052	0.1922

Notes: This table reports the estimated effect of whether a firm and politicians have interacted and its interaction with a dummy variable denoting whether year is or after 2012 on the logarithm of the number of land parcels purchased by that firm in that prefecture-year (column 1), the logarithm of the land areas purchased by that firm in that prefecture-year (column 2), the logarithm of the land value purchased by that firm in that prefecture-year (column 3), the fraction of the number of land parcels purchased by that firm over all the land parcels sold in that prefecture-year (column 4), the fraction of land areas purchased by that firm over all the land areas sold in that prefecture-year (column 5), the fraction of land values sold in that prefecture-year (column 6). The variable Interacted denotes whether a firm's headquarters in that prefecture-year politician's previous working prefecture and is equal to 1 if yes, 0 otherwise. 1(Year>=2012) is a dummy variable and is equal to 1 if year is or bigger than 2012, 0 otherwise. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where the destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A13: The Effect of Local Firms and Anti-Corruption Campaign

Dependent variable	(1)	(2)
	Unit Price / Average Unit Price within a 2KM Radius	
Local	-0.8221 (0.5386)	-0.6153 (0.6850)
Local * (Year>=2012)		-0.4183 (0.7131)
Prefecture-year fixed effects	Y	Y
Firm-year fixed effects	Y	Y
Origin province-destination province fixed effects	Y	Y
Observations	13,989	13,989
R ²	0.3751	0.3755

Notes: This table reports the estimated effect of whether a firm is local on the unit land price paid by that firm over the 2 km surrounding average unit land price by other firms in Column (1). Column (2) adds to Column (1) the interaction term of Local and anti-corruption year dummy added. The variable Local denotes whether a firm's headquarter is in that prefecture-year and is equal to 1 if yes, 0 otherwise. 1(Year>=2012) is a dummy variable and is equal to 1 for year is or after 2012 and 0 otherwise. All regressions control prefecture by year fixed effects, firm by year fixed effects, and origin province by destination province fixed effects where the destination province is the one prefecture-year locates and origin province is the one firm headquarters. Robust standard errors clustered at the prefecture level are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.