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## Industrial parks and urban growth: A political economy story in China

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# Industrial parks and urban growth: A political economy story in China<sup>1</sup>

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<sup>1</sup> A longer version of this study, with complete models and empirical results, was published earlier: Matthew Kahn, Weizeng Sun, Jianfeng Wu, & Siqi Zheng. 2018. "The revealed preference of the Chinese Communist Party Leadership: Investing in local economic development versus rewarding social connections." NBER working paper 24457. We thank Brian Casey, Yasheng Huang, Valerie Karplus and Greg Distelhorst for useful comments.

## **Abstract**

Over the last 30 years, the Chinese government has invested in new industrial parks with the intent of stimulating urban economic growth. In this chapter, we explore how provincial leaders allocate industrial parks' investment across cities within their jurisdictions, as they have the major decision-making power in the site selection of national and provincial level industrial parks in their province. a political economy framework to explain their priorities in selecting initial park site locations – promoting economic growth, reducing inequality, and rewarding their connected city leaders. We present a revealed preference test of industrial park site selection and document the willingness of China's provincial leaders to sacrifice economic development in order to reward social connections. We examine the causes and consequences of this potential misallocation of capital.

## **Keywords**

Industrial Park; Urban Growth; China; Social Connection

## **JEL Codes**

O2; R1

## Introduction

China has achieved rapid urbanization and economic growth over the past four decades, and thousands of industrial parks are the key engine for such remarkable development. Industrial parks attract firms to cluster spatially, generating strong agglomeration economies through input sharing, labor pooling, and knowledge spillovers. More importantly, these industrial parks have been built up as experiments for governments at different levels to test out market economy mechanisms and new institutions. However, an industrial park is not cost free as huge amounts of upfront investment, a large parcel of land assembling and development, and economic incentives including tax and tariff reductions and regulatory relaxation, are required. The past decades of experience of building industrial parks have illustrated a mixed picture: Some industrial parks have been successful in creating industrial agglomerations and contributed to local GDP, employment, exports, and FDI (Alder et al.,2016; Wang, 2013). But others have fizzled and even become “ghost towns”.

In this chapter, we explain such huge difference in the returns to industrial park’s investment by relating to the initial city selection. Particularly, we discuss the role played by political connection in the placement of industrial parks and the consequent urban growth effect. Our analysis is based on national and provincial industrial parks built since the beginning of 1980s. These higher-ranked parks enjoy a higher level of political autonomy in designing and experimenting with new institutions and policies (Alder et al., 2016). Anticipating these policy privileges and consequent economic gains, local governments have strong incentives to establish an industrial park with national or provincial level status to compete for external investment and increase local economic growth (Wu et al., 2013). All of these national and provincial industrial parks went through formal approval process, allowing us to explore a leader’s priorities of placing these huge capital investments. We explore how provincial leaders allocate industrial parks’ investment across cities within their jurisdictions, as they have the major decision-making power in determining where national and provincial level industrial parks are built in their province. Another innovation that we discuss below is our creation of a detailed social networks database that allows us to track the long-term connections between provincial leaders and city leaders at different points in time.

We start by documenting that industrial parks are one major type of place-based polities with general characteristics, and many governments in this world are fans of building industrial parks. Then We briefly review the history of industrial parks initiated by governments at different levels in China, including policy objectives, types of industrial parks, the number of high-ranked industrial parks and their spatial distribution since the beginning of 1980s. We also provide the macro evidence that industrial parks have made great contribution to China’s urban economic growth.

Next, we turn to a political economy framework to explain Chinese provincial leaders’ priorities in selecting initial park site locations. In China, the placement of an industrial park is attributed to both economic and political factors. Firstly, realizing the policy privilege and huge economic gains induced by industrial parks, local leaders have strong incentives to invest in such large capital investment for urban growth and competition as economic performance raise the probability of their being promoted in the Chinese Communist Party (CCP). Secondly, rising income inequality

in China in recent years has been viewed as a threat to social stability. Since Hu Jintao became China's President in 2002, the Chinese Communist Party (the CCP) has sought to promote the "balanced development" strategy, and thus has also rewarded political leaders who have successfully reduced their area's income inequality. Thirdly, a political leader also has a willingness to play favorites and allocate industrial parks to his connected subordinates, as a way to reward his friends and cultivate their loyalty. Thus, we assume each leader has a revealed preference in allocating industrial parks over three attributes: expected economic growth, expected inequality reduction, and rewarding a political connection. The leader would trade off among these three factors to achieve their highest utility. Economic loss would occur when a political leader allocates an industrial park to a connected city with weak economic fundamentals and lower expected economic gain.

In the third section, we use city-level data since the 1980s and estimate park site selection models to test for the marginal effects of a city's growth potential, expected inequality reduction and social connections on the probability that a park is sited in a given city. We measure how much economic growth a provincial leader is willing to sacrifice in order to help a subordinate friend. Our empirical results indicate that the misallocation of capital in China represents a tradeoff and thus has an "economic price" (the lost economic growth as an opportunity cost).

We conclude in the last section.

## **Industrial parks: engines of urban growth**

### ***What are industrial parks?***

Industrial parks are a typical type of place-based policies and have been increasingly noticeable in developing countries where manufacturing has a large share of the GDP. Industrial parks are built to act as a catalyst to enhance industrial development by providing public service and the accompanying policy interventions in support of investment. Industrial parks contribute to economic performance by attracting foreign investors and promoting export. In general, an industrial park includes several characteristics: (1) it is a geographically delimited area designated, planned and zoned for the purpose of industrial development; (2) it offers incentives in tax, tariffs, and regulator rules for firms based on physical location within a park; (3) it has a single management and administrator (Zeng 2010).

Many governments embrace the idea of setting up industrial parks to generate agglomeration economies as firms cluster spatially. Such agglomeration benefits may enhance firm's productivity through input sharing, labor market pooling, and knowledge spillovers (Zheng and Tan, 2020). The past experiences of building industrial parks in East Asia economies provide examples of success. However, establishing an industrial park is very expensive and may create distortions inside the economy. Some industrial parks in Africa, for example, failed entirely (Zeng 2016).

## *China's experience with industrial parks*

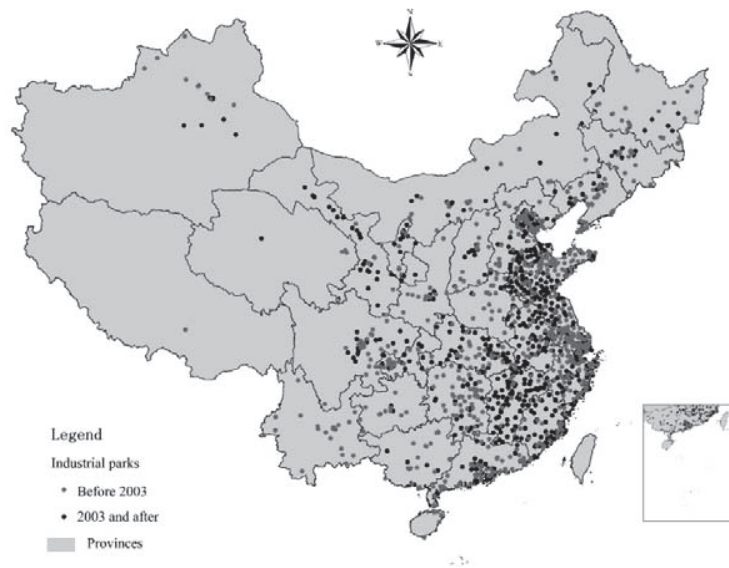
In China, industrial parks are typically established to achieve the following policy objectives (Zeng 2016): (1) attracting capital investment and generating job opportunities; (2) experimenting economic reforms strategies that Chinese leaders were fearful of rolling out nationwide at one go; (3) creating economic engines for local economy and learning technologies from foreign investors.

Given China's enormous population size and economic geography, industrial park policies have been implemented using a broad range of industrial parks at different administration levels. At the national level, beside citywide special economic zones (SEZs), other types of industrial parks include economic and technological development zones (ETDZs), high-tech industrial development zones (HIDZs), bonded zones (BZs), export-processing zones (EPZs), border economic cooperation zones (BECZs), and others. They share favorable policies but have different focuses. For example, HIDZs are to provide incentives stimulating the development of domestic high-tech firms, while the goal of FTZs and EPZs is to promote FDI and foster growth in export-oriented sectors. The success of national level industrial parks led local governments to set up industrial parks within their jurisdictions to boost local industrialization. According to the Bulletin List for the Official Boundaries of Chinese Industrial Parks provided by the Ministry of National Resource (MNR) (The Ministry of Land and Resource of China prior to 2018), there were 1,568 national-level and provincial-level industrial parks in more than 270 Chinese cities between 1980 and 2008<sup>1</sup>. Figure 1 presents the spatial distribution of national- and provincial-level industrial parks across cities over time in China. The cities in eastern area of China account for more than half of the parks and most of them were built before 2003.<sup>2</sup>

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<sup>1</sup> We choose 2008 as the ending year of our study period for two reasons. First, in response to the 2008 global financial crisis, Chinese government rolled out RMB 4 trillion (\$586 billion) stimulus program that ramped up expenditures on affordable housing, transportation infrastructure (highways, railways, and airports), and education, environment and technology innovation, making it difficult for us to disentangle urban growth effect of industrial parks from that of other place-based policies associated with this stimulus program. Second, China's President Xi Jinping launched an anticorruption campaign after he took over the power in 2012. The greater intensity of this campaign and the strengthening of Xi's personal leadership have led to the local governments' various other incentives, which is hard to be analyzed using our analytical framework on the trade-off among efficiency, equity, and cronyism.

<sup>2</sup> We divide China into three greater regions: Eastern region including *Beijing, Tianjin, Shanghai, Liaoning, Hebei, Jiangsu, Zhejiang, Fujian, Shandong, and Guangdong, Hainan, and Guangxi*; Central region including *Inner Mongolia, Jilin, Heilongjiang, Shanxi, Anhui, Jiangxi, Henan, Hubei, and Hunan*; Western region covering *Shanxi, Gansu, Qinghai, Ningxia, Xinjiang, Chongqing, Sichuan, Guizhou, and Yunnan* (*Guangxi* (*Tibet* is excluded due to missing data).



**Figure 1: China’s State-level and Provincial-level Industrial Parks from 1988 to 2008**

These national and provincial level industrial parks only occupy 0.1% of China’s total land area, but they contain 40% of the nation’s manufacturing jobs and accommodate 33% of foreign direct investment. These industrial parks have played a crucial role in transforming China from an agricultural economy toward a manufacturing powerhouse. Several studies have provided macro evidence that establishing industrial parks in China have positive impacts on urban economies (Alder et al. 2016, Schminke and Biesebroeck 2013, Wang 2013). But on the other hand, there are great heterogeneity in the return of these park investment. Around 30% of national and provincial industrial parks built in eight large cities in China during the period of 1998-2007 are found to fail to generate productivity spillovers (Zheng et al. 2017).

## **Allocation of industrial parks across cities: a political economy framework**

### ***A leader’s priorities of placing an industrial park: a framework***

The ex-post different returns on industrial park investment raises a question about the initial location selection problem. Industrial parks feature necessary infrastructure investment and huge opportunity cost of developing large parcels of land area as well as regulation privilege. Such huge park investment is always geographically allocated in a top down approach in China. Take the national level industrial parks as an example. There are normally two distinct ways through which an industrial park acquires national level status. One is that industrial parks directly are initiated by the central government before any construction or business activities are promoted. The other is



that the local governments first set up industrial parks and then submit proposals to be granted with national level status some years later. The process through which industrial parks are granted with provincial level titles is similar to that for national level industrial parks in two ways. One is a type of local implementation of provincially initiated projects whereas the other is considered as locally initiated projects.

A benevolent planner would invest in those areas offering the highest marginal productivity of investment as a leader with political career concerns who seeks to rise in the Chinese Communist Party (CCP) has an incentive to invest in projects that contribute to economic growth (Li and Zhou, 2005). Local economic performance, measured as real GDP growth, is considered to be the main performance measure for judging a provincial leader (Maskin et al., 2000). On the other side, rising income inequality in China in recent years has been viewed as a threat to social stability. Since Hu Jintao became China's President in 2002, the Chinese Communist Party (the CCP) has sought to promote the "balanced development" strategy, and thus has also rewarded political leaders who have successfully reduced their area's income inequality. This suggests that a leader would tradeoff efficiency gains versus equity considerations when choosing where to locate place-based policies such as a new industrial park.

An alternative theory is that such top down approach in placing industrial parks, especially those with high level status, would provide incentives for a leader to play favorites. Allocating large sum of capital investments such as industrial parks to the closet followers is much helpful in strengthening loyalty of subordinates to the political leader, thus increasing the probability of the latter to survive in office. Dittmer (1995) and Jia, Kudamaatsu, and Seim (2015) argue that building a network of loyal subordinate is very important for political leaders to reduce the uncertainty of their political survival in the context of China.

We posit that there would be a huge heterogeneity in the growth outcomes of placing an industrial park across cities as Chinese leaders' priorities in selecting initial park site locations are different. To test this hypothesis, a revealed preference framework of Chinese leaders in allocating industrial parks across cities is employed. We assume that each provincial leader has the same objective function defined over three attributes: expected economic growth, expected inequality reduction, and rewarding a political connection.

The provincial leader's expected utility from building a park in city  $j$  is expressed as follows:

$$U_{ij}^* = f(\overline{\Delta GDP}_{ij}, \overline{\Delta GINI\_GDP}_{ij}, CONNECTION_j)$$

The expected economic gain is measured as the expected increase in the value-added (GDP) that park  $i$  will bring to city  $j$ ,  $\overline{\Delta GDP}$ . The expected inequality reduction is measured as the expected decrease in the within-province city-level Gini coefficient (based on GDP per capita) attributed to the growth generated by this park,  $\overline{\Delta GINI\_GDP}$ <sup>3</sup>. Expected economic growth and expected

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<sup>3</sup> This is a city-level Gini coefficient, instead of an individual-level one. If the placement of a park in a city leads to the increase of this city-level Gini coefficient but also trigger some poor people from poor areas in that province to migrate to this city, it may not necessarily cause an increase of individual-level Gini coefficient. However, our



inequality reductions will directly increase a provincial leader's promotion likelihood.

The connection measure, CONNECTION, is to represent whether the provincial leader is politically connected to a city leader within his/her jurisdictions. It is a dummy variable as we are unable to quantify a dollar value of these personal benefits.

We assume that provincial leaders are aware that they face a counter-factual treatment effect problem because they do not know what the GDP growth caused by a new park would be for each city in the choice set. We model the provincial leaders as econometricians who use all available information to impute this counter-factual expectation. Intuitively, a leader must predict what would be the GDP growth in each city if he/she assigns a park there. One of the key assumptions in such framework is a symmetry in solving this prediction problem between the econometrician and the decision maker. Under our assumption of symmetry, we are able to recreate the provincial leader's perceived tradeoff at the time he/she makes the allocation decision. Provincial leaders will recognize that they may sacrifice significant expected economic growth by helping a political connection<sup>4</sup>. This is an "economic price" because there is a direct connection between local economic growth and being promoted within the Chinese Communist Party.

## **Economic cost of politically driven distribution of industrial parks: Estimation and calculation**

### ***Measuring political connection***

To test for the role of political connections as a cause of capital misallocation requires measures of the political connections between local officials (city mayor or party secretary) and the upper-level government leaders (provincial-level governor or party secretary). Past research on the political economy of such connections has emphasized two criteria (Xu, 2018). One is that this political tie measure should be objective. The other is that such measure can solve the issue of endogenous social network information. To meet these criteria, we measure political connections between city leaders and provincial leaders along four dimensions: workplace, birthplace, university/college, and political faction.

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interviews with city and provincial leaders indicate that the upper-level officials care more about such a place-based city-level inequality measure when evaluating their performance.

<sup>4</sup> We acknowledge that we ignore province level general equilibrium effects triggered by the park. We are implicitly assuming that a new park located in city  $j$  generates new activity or attracts firms from outside the province, and it would not lead to significant reshuffling of economic activity (such as population migration) within the province. We are also assuming away any cross-city spillover effects. Alder et al. (2016) directly test for park spillovers and find some evidence of positive spillovers for cities close to the treated city. In the main results, we assume the SUVTA (Stable Unit Treatment Value Assumption) condition holds.

The first measure defines a city leader and a provincial leader to be connected if they once worked in the same workplace, based on the assumption that politicians are more likely to be friend with those who share the work experience in the same place. Jia et al. (2015) measure political connections for provincial governors with top leaders in the central government using this shared work experience approach. The second measure is based on the geographic location where politicians were born. The underlying assumption is that politicians are more likely to keep close relations with others who come from the same birthplace. Do et al. (2017) provide evidence for favoritism towards one’s hometown by government officials in Vietnam. The third measure defines social connections between city leaders and provincial leaders as they share the study experience in the same university or college. This is based on the assumption that politicians are more likely to form social ties in their alumni network. Fourth, we define city leaders and provincial leaders to be connected through their political factions. The underlying assumption is that politicians tend to be allies when they belong to the same faction (Francois et al., 2016). We highlight two main factions within the CCP, *tuanpai* (the Communist Youth League of China, CYLC) and non-*tuanpai*.

To build these political connections, we construct a data set on the city and provincial leaders between 1980 and 2008 in China by undertaking a large-scale data collection from *Duxiu*, a local Scholar Search Engine with millions of digitized literatures, newspapers, journalists and books in Chinese provided by China’s CNKI. This data set contains extensive biographic information on each official including name, birth year, birth place, education record, the list of positions held in the party or in the government in the past along with the period in which each position was held, and the record of whether he had received the training in China’s Central Party School.

We mainly use the workplace-based social connections measure between city and provincial CCP party secretaries (Jia et al. (2015) employ a similar strategy). In China’s bureaucratic hierarchy, party secretary has a higher ranking than the governor at the same administrative level (province or prefecture city). Table 2 summaries the shares of city-level top officials who are politically connected to the corresponding provincial level key leaders. As shown in Column (1), roughly one quarter of the 107 provincial level party secretaries are politically connected with his/her city-level subordinates (party secretaries) if they have worked in the same workplace, based on the assumption that politicians are more likely to befriend others who share a similar working experience in the same place.

Table 1: Summary Statistics for Political Connections

	Provincial party secretary		Provincial governor	
	(1) City-level Party Secretary	(2) City Mayors	(3) City-level Party Secretary	(4) City Mayors
Workplace	24.3%	14.0%	27.0%	17.7%
Birthplace	4.3%	4.0%	3.6%	5.5%
Alumni	0.7%	0.4%	1.7%	1.7%
Faction	2.7%	3.0%	4.5%	3.8%
No. of Provincial officials	107		136	

Notes: The percentages in this table are the share of city-level leaders (city party secretaries or mayors) with political connection with the corresponding provincial government leaders (provincial party secretaries or provincial governors) in all the same-type city leaders.

## ***Predicting economic growth and income inequality dynamics induced by industrial parks***

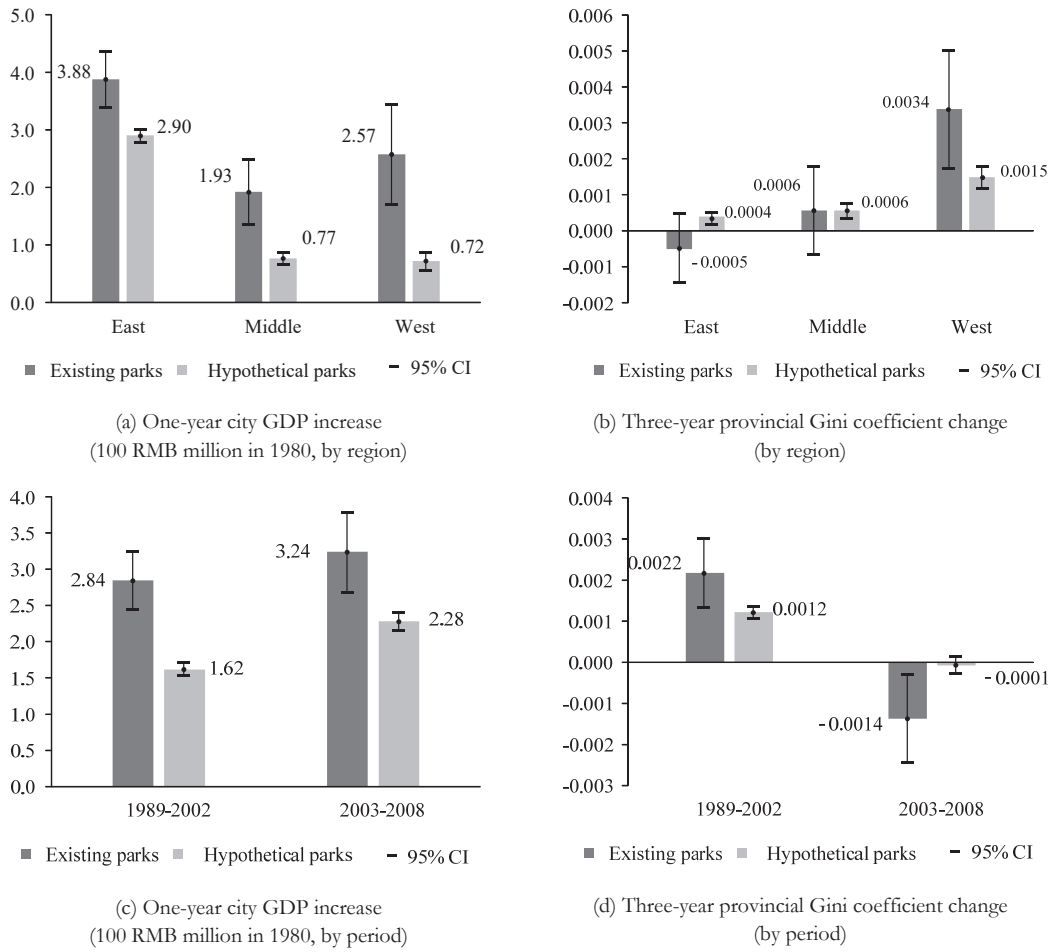
Another task for recovering a provincial leader's objective utility from placing an industrial park within his jurisdiction is to predict growth effect and income inequality dynamics induced by new parks. We collect city-level data from the China city statistical yearbooks. We use GIS to calculate a city's straight-line distance to the nearest highway entrance, airport, railway station and the main seaport. We cover 276 prefecture-level cities during the period of 1988-2008.<sup>5</sup>

Similar to Wang (2013) and Alder et al. (2016), we first estimate the park treatment effect. Then we decompose such treatment effect as a function of city-park-year attributes, including natural endowment, economic fundamentals, park attributes, and year dummies. Based on such decomposition, we calculate the heterogeneous ex-post growth effect of receiving a park in terms of GDP across cities and in different years. With these expected GDP increases after receiving a park, we further calculate the expected Gini coefficient in a province and its over time change based on the expected GDP per capita at the city level.

Figure 2 shows the descriptive statistics of the one-year GDP increase and three-year Gini coefficient change due to the introduction of a real or a hypothetical park by region and by time period. We present the data at a broader regional unit: eastern, central, and Western regions. Our study period into two regimes under two Chinese Presidents – Zemin Jiang (1989-2002) and Jintao Hu (2003-2008). On average, the expected city GDP increases generated by parks are larger in the east region, and in the latter period. At the same time, we can see that such expected GDP increase generated by an average industrial park is significantly larger than the counterfactual effect if placing this park in other cities. This indicates that provincial leaders do choose to place parks in the cities where those parks can generate higher expected economic gains. This preference (measured in the gap between real and hypothetical parks) is stronger in middle and western regions, and in the earlier period. When looking at how industrial parks change the expected income inequality in a province (Gini coefficient of GDP per capita), real parks in the east and middle regions do not have significant effect on Gini coefficient, but those in the west region significantly deteriorate income inequality. The regime change is clear – in the earlier period, the placement of industrial parks significantly deteriorates income inequality, while this pattern reverses in the latter period.

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<sup>5</sup> We exclude four municipal cities and those in *Qinghai*, *Tibet*, and *Ningxia*. There was no new national- or provincial-level park built after 2008.



**Figure 2: Estimated GDP increase and Gini coefficient change attributed to a real or a hypothetical park in a city**

### *Economic loss of placing a park generated by political connection*

One of the key assumptions in our analysis is that provincial leaders have a career incentive to pursue economic growth in the political system of current China. To test for this assumption, we regress a dummy variable of whether a provincial leader is promoted on the GDP growth, income inequality measured by Gini coefficient of GDP per capita across cities, and its connection with top leaders in the central government. The estimation results show a highly and positively effect of provincial GDP growth on a provincial leader's promotion likelihood. Reducing within-provincial inequality is found to be positively related to a provincial leader's promotion when we use the party secretary sample. Not surprisingly, these provincial leaders' social ties with top leaders

in the central government also help them to get promoted. These results confirm the argument that economic performance is complementary to political connection in affecting political leader's promotion (Jia et al. 2015).

Next, following our analytical framework of the provincial leader's expected utility function, we recover a provincial leader's preference of allocating an industrial park within his jurisdictions. We assume that a provincial leader would maximize his utility from choosing a city to place a park by a tradeoff among the expected GDP growth induced by new park, the expected income inequality reduction, and rewarding political connection. We estimate a park's location choice model by regressing a dummy variable of whether a park is placed in a city in one year on the expected GDP growth and the corresponding income inequality induced by this park as well as the variable measuring the connection between provincial and city level leaders. We consider the short-, medium-, and long-run growth effect of receiving a park and its consequent within-provincial income inequality reductions as new parks create a cumulative growth process (Zheng et al. 2017).

Table 2 reports the baseline estimates. New parks create a cumulative growth process as a new agglomeration takes root. This means that the long run growth effects are larger than the short run effects. Across columns (1) to (4), we consider the short-, medium- and long-run impacts, from 1 year to 10 years after the opening of a park. Here  $\overline{\Delta GDP}$  is the expected accumulated GDP increase over that period, and  $\overline{\Delta GINI\_GDP}$  is the expected change in the Gini coefficient of GDP per capita between the start and end year of that period. The dummy CONNECTION equals one if the provincial leader and city leader in the park's city in the opening year are socially connected. In this baseline model we use the workplace-based connection measure between the city and provincial CCP secretaries. For each time horizons,  $\overline{\Delta GDP}$  and CONNECTION both have a statistically significant effect on the likelihood of site selection. When a provincial leader decides where to place a park, he considers both short-run and long-run growth effects. For the short-run (one year), if a park is expected to generate a 100 million RMB GDP increase to a given city, this city will enjoy a 0.76 percentage point increase in the likelihood of receiving the park. Since  $\overline{\Delta GDP}$  is the expected accumulated GDP increase, its coefficient shrinks from column (1) to (4) but the size of its effect is stable.

Controlling for the effects of a new park on economic growth and regional cross-city income inequality, we find that social connections influence the siting of a park. This connection variable is statistically significant at the 1% level in each of the four regressions. As shown in column (1), the probability that a park is placed in a given city increases by 6.6 percentage points when the local leader is connected.

For the whole sample, income inequality is not a major consideration for provincial leaders' park placement decision. The coefficient of  $\overline{\Delta GINI\_GDP}$  is insignificant for all time horizons. It has a positive sign in the first year and turns negative since the third year. This is a suggestive evidence that the inequality concern only matters when provincial leaders consider a park's long-term impact.

**Table 2: Conditional Logit Estimates of the Industrial Park Locational Choice Decision**

	(1)	(2)	(3)	(4)
	1 year	3 years	5 years	10 years
$\overline{\Delta GDP}$	0.00759 (0.00347)	0.00264 (0.000995)	0.00158 (0.000587)	0.000796 (0.000316)
$\overline{\Delta GINI\_GDP}$	1.765 (4.739)	-0.452 (0.812)	-0.408 (0.464)	-0.323 (0.387)
CONNECTION	0.0663 (0.0219)	0.0694 (0.0214)	0.0667 (0.0216)	0.0686 (0.0215)
N	16543	16386	16166	16130
pseudo R2	0.013	0.013	0.014	0.013
Total cost of social connections GDP (100 million RMB)	8.74	26.29	42.22	86.18
Annualized cost of social connections GDP (100 million RMB)	8.74	8.76	8.44	8.62
Annualized cost of social connections as a share of provincial GDP	1.62%	1.62%	1.56%	1.60%

Note: Top number in cell is marginal effect  $df/dx$ . Robust standard errors are reported in parentheses, which are clustered at province-year level.

We are interested in what economic cost in terms of GDP growth a provincial leader would sacrifice to place an industrial park in the city where his/her friend sits in office. Table 3 show that calculations of the misallocation costs induced by political connection based on the estimates of a provincial leader's allocating an industrial park across cities within his/her jurisdiction. The annualized cost of social connections is quite stable for short and long-time horizons – about 850 to 875 million RMB, around 1.5% - 1.6% of that province's annual GDP.

**Table 3: Misallocation costs generated by political connection**

	(1)	(2)	(3)	(4)
	1 year	3 years	5 years	10 years
Total cost of political connections GDP (100 million RMB)	8.74	26.29	42.22	86.18
Annualized cost of social connections GDP (100 million RMB)	8.74	8.76	8.44	8.62
Annualized cost of social connections as a share of provincial GDP	1.62%	1.62%	1.56%	1.60%

Note: Top number in cell is marginal effect  $df/dx$ . Robust standard errors are reported in parentheses, which are clustered at province-year level.

## Conclusion

This chapter has contributed to the political economy literature by studying the choices of Chinese provincial leaders in allocating industrial parks, engines for urban economic growth. We present a revealed preference analysis of a provincial leader's placing such huge capital investment, in which he/she maximizes the utility by a tradeoff among expected economic growth, the dynamic income inequality, and rewarded connection. By creating a new social connections database, we document that Chinese provincial leaders are willing to sacrifice some urban economic growth in order to help a local leader who is a social connection. Political connections are a cause of capital misallocation. Such decisions do impose some costs for the decision maker. In the Chinese Communist Party, provincial leaders are more likely to be promoted if their province's GDP is growing faster. Our estimates suggest that a leader reduces his own promotion chances by about 1.8 percentage points when he assigns a park to a connected friend.



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