Promotion Incentives, Political Competition, and Public Land Prices

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Abstract

Existing theory posits that institutionalized promotion within party systems fosters credible power-sharing in authoritarian regimes, bolstering regime stability and performance. This paper, however, presents evidence indicating that such institutionalization increases protests and reduces regime stability. I argue that the career incentives of politicians within party systems incentivize violations of non-elite property rights, generating distributional injustice and escalating conflicts between governments and citizens. Utilizing data from 600,000 residential land transactions, surveys, and protest records from China, I demonstrate that: 1) local party secretaries with high career incentives tend to manipulate land prices, 2) career-seeking politicians contribute to heightened collective action on land issues, with land price intervention serving as the channel through which career incentives impact collective actions, and 3) distributional injustice is the mechanism drives conflicts between citizens and governments. These findings challenge the notion that institutionalized promotion of party cadres in authoritarian regimes enhances regime stability.

1 Introduction

The institutionalized promotion of cadres within single-party regimes is generally believed to enhance regime stability (Magaloni, 2008; Landry, 2008; Svolik, 2012; Geddes, Wright and Frantz, 2018; Meng, 2021). By grounding advancement in rule-based and predictable criteria, a hierarchical party system provides a clear pathway for the career progression of party officials. This institutional arrangement ensures the

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alignment of interests between authoritarian regimes and their ruling elites, thereby contributing to regime stability. However, this paper argues that institutionalized promotion systems in authoritarian countries can exacerbate conflicts between the ruling elites and the broader non-elite population, undermining regime stability.

I argue that the career incentives of party cadres drive them to mobilize resources, such as land and financial capital, to achieve their personal political and economic objectives. However, this approach crucially depends on their ability to amass sufficient resources to sustain such a strategy, which unavoidably incentivizes them to infringe upon the property rights of non-elites to secure enough resources. Moreover, career-minded officials often align themselves with key social groups to garner support for their goals, further marginalizing non-elites and making them more susceptible to exploitation. The widespread infringement of property rights among the general population breeds resentment towards the regime and exacerbates conflicts between the ruling elites and non-elites, thereby posing a risk to the regime's stability.

To analyze my argument, I explore the impact of career incentives for prefecture-level party secretaries on residential land allocations in China. Local leaders in China compete in a tournament-style promotion system, where the advancement of lower-ranking officials is decided by higher-ranking ones based on their relative performance (Li and Zhou, 2005; Xu, 2011). These institutional frameworks, recognized by scholars and practitioners alike, have played a pivotal role in maintaining political stability and are linked to the significant economic development witnessed in China over recent years.[1]

I selected residential land as my focus due to its critical importance as an asset for both individuals and the state.[2] The ownership of land influences both political elites and the general public's behaviors, with far-reaching implications for public policies, conflicts, and democratization (Moore, 1993; Ansell and Samuels, 2014; Ansell, 2014;

[1]Extensive literature demonstrates the positive link between economic performance and career incentives in China; see Maskin, Qian and Xu (2000), Landry (2008), Caldeira (2012), Lü and Landry (2014), Bulman (2016), Yao and Zhang (2015), Ang (2016), Xi, Yao and Zhang (2018), Landry, Lü and Duan (2018), Wang, Zhang and Zhou (2020), Lei and Zhou (2022).

[2]Causa, Woloszko and Leite (2019) studied OECD countries and found that housing makes up more than half of the total assets in households' portfolios. The share of housing assets among the middle-class households is even larger, approximately 60%.

Finkel, Gehlbach and Olsen, 2015; Albertus, 2020). In the Chinese specific context, the property and real estate sectors significantly contribute to the GDP, constituting around 25 to 30% (PIIE, 2022).[3]Local governments in China have monopolistic control over public land, and previous research indicates that local leaders exploit land resources for political gain (Whiting, 2011; Lin, 2014; Rithmire, 2015).[4] However, the complex relationship between the career incentives of local officials, land resources, and their political implications remains insufficiently explored.

To empirically test my argument, I collected an original dataset comprising 600,000 observations on residential land transitions in China between 2000 and 2015. The data include details such as the date of transaction, land location, buyers, plot area, intended land usage, selling methods, and land quality. I geo-located all land transactions and merged the dataset with geospatial data, such as nightlight and population density surrounding each land parcel, as well as geographical distance to the city center and railway station, to construct a comprehensive micro-level dataset. Furthermore, I matched the land transaction data with the career records of local political leaders from Jiang (2018). Finally, I obtain the city-level protest data from Zhang and Pan (2019).

I estimate the ex-ante promotion probability of local party secretaries to construct the career incentive index based on existing literature (Wang, Zhang and Zhou, 2020; Fang, Li and Wu, 2022). However, I take their approach one step further by leveraging cutting-edge machine learning methods—specifically, generalized kernel regularized least squares (gKRLS) and cross-fitting, which are well-suited for prediction tasks. The gKRLS model allows researchers to flexibly estimate the nonlinear relationships between independent variables without imposing functional form assumptions (Chang and Goplerud, 2023). Meanwhile, by splitting the dataset into multiple training and validation sets, and iteratively training the model on different subsets while validating on others, cross-fitting ensures that the gKRLS model produces accurate and reliable predictions for local leaders' promotion chances.

[3]This number is relatively high compared to the average contribution of the real estate sector to GDP in the United States, which is about 15-18%; source: bit.ly/3QOdHTT.
[4]Also see Su and Tao (2017).

Using the career incentive index constructed above, my empirical analysis proceeds in three steps. First, by examining micro-level land transaction data and exploring the career incentives of local leaders both within and across city borders, I show that local leaders driven by strong career incentives are likely to raise land prices to further their career prospects. Specifically, I find that a one standard deviation increase in career incentives corresponds to a rise of approximately 51 RMB ($\approx$ \$7) per square meter in residential land prices.

Second, the analysis of city-level data on protests and land prices reveals that heightened career incentives among local officials are linked to an increase in protests, including violent and disruptive collective actions, with land price manipulation acting as a channel influencing citizens' behavior. A causal mediation analysis indicates that land price manipulation is responsible for 25% of the observed protests. Furthermore, utilizing data from the Chinese Family Panel Survey (CFPS), I illustrate that distributional injustice spurs individuals to protest. Specifically, a one standard deviation increase in the compensation gap raises the likelihood of individuals who have lost land engaging in conflicts with local government officials by 3.7%. Additionally, this effect extends to individuals who, while not directly affected by land expropriation, witness such governmental infringements on property rights, leading to a 1% increase in their propensity to engage in conflict.

The results of this study contribute to the understanding of regime stability in authoritarian countries. Existing theoretical argument claims that institutionalized party systems within authoritarian regimes serve to enhance elite cohesion and reduce conflicts (Gandhi and Przeworski, 2007; Gandhi, 2008; Magaloni, 2008; Svolik, 2012; Meng, 2021). These theories suggest that the formal structures and processes inherent in institutionalized systems provide mechanisms for dispute resolution and power distribution, thereby contributing to the overall stability of the regime. However, my research indicates that the institutionalization of party systems in authoritarian regimes can exacerbate conflicts between ruling elites and non-elites, posing a threat to the stability of the regime.

Second, this paper clarifies the causal relationship between the career incentives

of local officials, land prices, and adverse political outcomes. My empirical findings complement existing research on fiscal imperatives (Tao et al., 2010; Whiting, 2011; Chen and Kung, 2016), political patronage (Chen and Kung, 2019), and the role of informal institutions such as lineage groups (Mattingly, 2016) in shaping local government decisions regarding land allocation, expropriation, and urban land development. Notably, my study connects career incentives with collective actions and highlights how distributional injustice, resulting from interventions in land pricing, acts as a mechanism to increased political conflict in China. This contribution offers insight to the body of literature that examines the repercussions of local governments' coercive and violent land expropriations on public trust and conflicts with local authorities, thereby enriching the discourse on the socio-political impacts of land management in China (Cui et al., 2015; Sargeson, 2016; Cai et al., 2020, 2021; Sha, 2023).

Lastly, it contributes to the extensive literature on the political economy of land property rights. Existing studies document a variety of negative effects of incomplete property rights, such as suppressing human capital (Galor, Moav and Vollrath, 2009; Albertus, Espinoza and Fort, 2020), reducing agricultural productivity and investment (Besley, 1995; Banerjee and Iyer, 2005), increasing social conflict (Heurlin, 2016; Domenech and Herreros, 2017; Albertus, 2020), and hindering economic development (Albertus et al., 2016). I illustrate how local governments can exploit the property rights gap for career advancement and economic development while acknowledging that such actions can lead to political repercussions counteracting potential development advantages.

2 Theory

In this section, I present my theoretical argument on how institutionalized promotion within a party system can provoke conflict between ruling elites and non-elites. I then examine the context of China, offering a detailed theoretical perspective on how state ownership of land, coupled with meritocratic political promotion, motivates local governments to manipulate residential land prices. Finally, I address the political

repercussions resulting from such manipulations of land prices.

2.1 Institutionalized Party System and Regime Stability

Existing literature indicates that institutionalized party systems play a crucial role in enhancing the stability of authoritarian regimes (Gandhi and Przeworski, 2007; Geddes, Wright and Frantz, 2018). A central mechanism by which party systems contribute to regime stability is through credible power-sharing among ruling elites (Magaloni, 2008; Magaloni and Kricheli, 2010; Svolik, 2012). First, an institutionalized promotion system establishes a rule-based mechanism for rewards and punishments, creating stable career expectations for party cadres (Svolik, 2012). Second, the hierarchical structure of the party system facilitates the distribution of spoils and offices, fostering a vested interest in the regime's continuity among the ruling elite (Magaloni, 2008). More importantly, institutionalized power-sharing helps to mitigate commitment problems and imposes some constraints on the dictator's arbitrary actions by enabling ruling elites to initiate collective actions against dictators (Gehlbach and Keefer, 2012; Boix and Svolik, 2013). Finally, recent studies illustrate that a strong party, characterized by established rules and procedures that depersonalize its operations and limit the leader's ability to make arbitrary decisions, ensures the party has better governance and economic outcomes than regimes with weak parties (Bizzarro et al., 2018; Meng, 2021).

Political parties can also serve as a tool for co-opting potential rivals (De Mesquita et al., 2005; Levitsky and Way, 2010). To maintain control over politics, ruling elites strategically identify and integrate individuals, social groups, and political parties into the regime's structures (Magaloni, 2006). The distribution of economic benefits and privileges, and granting a certain degree of policy influence is the binding force between the ruling elites and potential rivals. Furthermore, the threat of withdrawing these advantages in the event of defection acts as another mechanism for securing the allegiance. By neutralizing opposition, authoritarian regimes significantly increase their internal stability and regime longevity.

Examining existing theoretical frameworks reveals a prevalent assumption: the

stability of a regime is significantly influenced by the unity among its elite members. This perspective argues that political parties with rule-based and predictable criteria for the promotion of their cadres can enhance elite cohesion and generally outperform those lacking such structures. However, my theoretical argument challenges this traditional view. I argue that institutionalized promotion systems in authoritarian countries, rather than reducing conflicts, in fact, escalate conflicts between the ruling elites and the broader non-elite population, thus compromising the regime's stability.

First, the promotion mechanisms within party ranks incentivize members to breach the property rights of the masses to meet their political goals. This behavior persists, whether the promotion criteria emphasize merit or loyalty. In systems where advancement is merit-based, party officials are driven to breach the property rights of the non-elite to monopolize and extract economic resources, enhancing the ruling elites' capability to foster economic growth. Similarly, in systems that prioritize loyalty for promotions, lower-ranking officials are often compelled to mobilize resources in ways that breach the property rights of non-elites to show their loyalty.[5]

Second, the pursuit of career advancement often motivates ruling elites to strategically align with key social groups that can assist in achieving their political and economic objectives. Such alliances often lead to the formulation of policies that disproportionately benefit these select groups at the expense of the broader population's rights and interests. For example, a government might enact regulations to control interest rates, thereby channeling financial resources toward business sectors considered essential for economic growth or political stability. This strategy strengthens the relationship between ruling elites and pivotal business sectors. However, it also imposes costs on savers and those with fixed incomes.

As a result, the violations of property rights foster resentment against the regime and heighten conflicts between the ruling elites and the non-elites, thereby reducing the regime's stability. Therefore, while a hierarchical party system with rule-based promotion of politicians might create a stability within ruling elites, it inadvertently

[5]Numerous studies highlight that political loyalty, driven by the career incentives of local politicians, results in predatory behaviors. See Kung (2011) for research on the Great Famine in China and Rozenas (2019) for research on Stalin's "Terror by Hunger" in Ukraine.

creates deeper societal divisions and unrest, challenging the premise that institutionalized promotion of party cadres in authoritarian regimes contributes to regime stability.

To support my argument, my study explores how career incentives for local party secretaries influence the allocation of residential land in China and lead to escalated conflicts between the government and citizens. I show that local party secretaries intentionally inflate the value of residential land to advance their careers and favor real estate-related sectors. However, this strategy depends on the local government's control over land resources, resulting in land expropriation practices where the compensation provided to landowners is significantly below the market value. Such property rights violations intensify conflicts between government officials and citizens, thereby posing a threat to the regime's stability and legitimacy.[6]

2.2 Career Incentives and Land Prices

In modern economies, the value of residential land is influenced not just by its inherent utility but also by government regulations and zoning policies. In democratic societies, property owners actively seek to enhance their economic interests by shaping housing supply and land use regulations. Research on the "homevoter hypothesis" and the "Not In My Back Yard" (NIMBY) phenomenon underscores homeowners' significant role in local politics (Hankinson, 2018; Larsen et al., 2019; Yoder, 2020; Hall and Yoder, 2022). These homeowners advocate for strict zoning laws and development restrictions to limit housing supply, thereby boosting property values (Glaeser, Gyourko and Saks, 2005; Trounstine, 2018; Marble and Nall, 2021). Local politicians, in pursuit of electoral victory, often craft policies that cater to the interests of property owners, particularly in tightly contested elections (Fischel, 2005; Dehring, Depken and Ward, 2008; Solé-Ollé and Viladecans-Marsal, 2012).

Unlike politicians in democratic nations, China's local party leaders operate within

[6]It's important to highlight that my theoretical proposition concerning predatory actions by local governments within the land market aligns closely with Ong (2010) depiction of "local clientelist states." However, Ong (2010) examines local clientelist states through the lens of government and business dynamics, underscoring the significant personal benefits accruing to local political leaders. In contrast, my study delves into the influence of political motivations that impel local leaders toward predatory behaviors.

a system that emphasizes merit-based criteria for their selection, training, and promotion (Manion, 1985; Huang, 1995). This system places local officials in a tournament-style competition, where career advancements for lower-ranking officials are determined by higher-level officials based on their performance relative to peers. The foundation enabling this comparative assessment is regionally decentralized authoritarianism (RDA). In RDA, the central government delegates significant decision-making power to local and regional officials while retaining control over essential governance aspects (Xu, 2011).

Local leaders seeking career advancement are required to achieve various policy goals set by higher authorities, with a particular focus on economic growth (Li and Zhou, 2005). Although there is an ongoing debate about the influence of merit versus patronage on promotions, evidence suggests that GDP growth plays a crucial role in the advancement of officials, especially at the municipal level (Jia, Kudamatsu and Seim, 2015; Landry, Lü and Duan, 2018; Jiang, 2018; Xi, Yao and Zhang, 2018; Chen and Zhang, 2021). These institutional mechanisms, widely acknowledged by both scholars and practitioners, have contributed to political stability and are associated with the remarkable economic growth observed over the last few decades in China (Shirk et al., 1993; Qian and Xu, 1993; Landry, 2008).

Given the connection between economic growth and the career advancement of party secretaries, I argue that local party secretaries intentionally increase residential land prices as a means to enhance their economic performance. My argument is based on the following line of reasoning. Firstly, raising residential land prices can stimulate a thriving housing market, which directly contributes to local economic growth. Due to the speculative nature of the real estate market, increasing residential land prices attract more investors and developers to invest in the local economy. The heightened investment leads to new construction projects, increasing the demand for construction materials, labor, and related industries. Consequently, this fosters more job opportunities and stimulates economic growth.

Moreover, promotion incentives motivate party secretaries to increase residential land prices to strengthen local government revenue. Local governments want

to expand their revenue for two purposes. First, the fiscal reform that happened in 1994 increased the fiscal capacity of the central government while leaving expenditure responsibilities unchanged for local governments. The mismatch between local governments' fiscal capacities and expenditure responsibilities prompts them to exploit their land ownership to offset budgetary deficits. Second, local leaders are strongly motivated to invest in extensive infrastructure and large-scale projects to signal their competence (Chen and Kung, 2016; Lü and Landry, 2014; Henderson et al., 2022). Given that land constitutes the foremost asset for local governments and they possess complete ownership over land transfer fees, there is a tendency to increase residential land prices to finance these investments.[7]

2.3 Land Price Distortions and Conflicts

Rithmire (2017) demonstrates the "complementarities" role of land institutions with fiscal and financial institutions in China, which tends to favor dominant political actors while placing burdens on less powerful ones. Therefore, it is crucial to analyze the distributional consequences of land price interventions to understand the political consequences associated with such interventions.

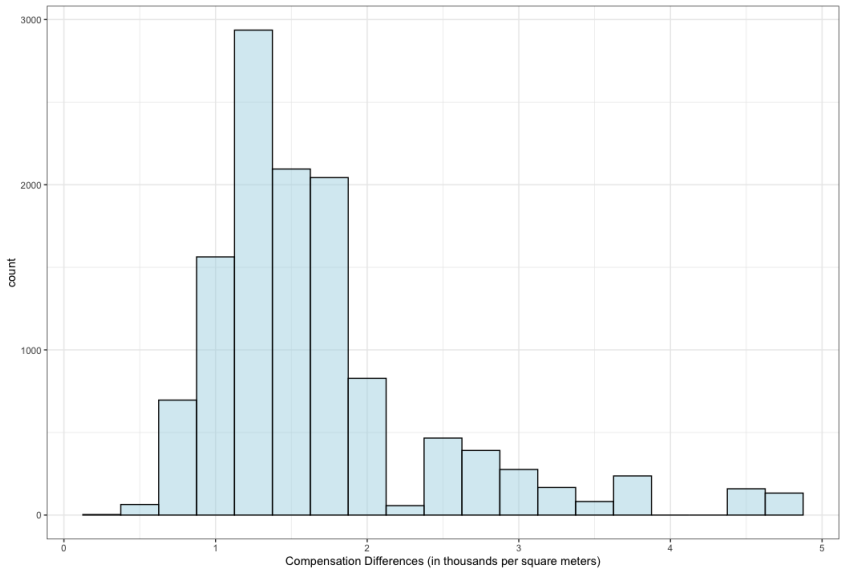
Building upon the existing literature, I argue that the pursuit of land-centered development, while benefiting local governments and gaining the support of key social groups, such as business elites and some urban residents, often undermines the property rights of citizens, particularly those with limited legal and economic resources to challenge state-led land expropriation. It is important to note that this development strategy crucially relies on the government's ability to acquire land at low costs so that they can leverage land resources not just for urban and industrial projects but also to maximize local government revenue. The consequence of this strategy is a widespread violation of citizens' property rights, often leaving them disenfranchised and without adequate recourse. [8] Figure 1 demonstrates significant disparities between the mon-

[7]Figure 2 illustrates that revenue generated from residential land sales constitutes the largest proportion of government income derived from land sales.

[8]Land compensation in rural areas is determined by agricultural yields in the years preceding conversion, including compensation for the loss of land, subsidies for relocation, and loss of property on the land. The compensation does not include land future values and is significantly lower than the

etary compensation received by land-losing respondents and the provincial average residential land prices using data from China Family Panel Studies. It is evident that all respondents who experienced land expropriation received compensation that was lower than provincial average residential land prices, indicating varying degrees of potential under-compensation.

Figure 1: Compensation Gaps Among Land-losing Citizens



Notes: Data comes from China Family Panel Studies, Wave 2010, please refer to Section 4 for a detailed discussion. Compensation gaps are quantified as the disparities between the monetary compensation received by land-losing respondents and the provincial average residential land prices.

I argue that the growing gap between the market values of land and the compensation provided to those who lose their land increases the risk of conflicts between citizens and local authorities for several reasons. First, this disparity evokes strong feelings of injustice and resentment towards local authorities, thereby increasing the likelihood of resistance against state-led land expropriation. Secondly, the prevalent feeling of being overlooked and marginalized in the development process erodes citizens' trust in government policies, diminishing their willingness to cooperate with governments. Finally, the lack of transparency in land expropriation intensifies perceptions of corruption within local governments. As a result, this undermines the regime's legitimacy in the public's eyes.

Furthermore, I argue that state-initiated land expropriation not only triggers con-

market value; see a detailed discussion in (Cai, 2016; Cai, Liu and Wang, 2020).

flicts with citizens directly affected but also extends to those in the same community who, though not immediately impacted, witness these grievances. Based on literature on contentious politics, this diffusion effect arises from connections such as social networks and kinship ties between citizens who have lost land and those who have not been expropriated (Zhang, 2015; Yang, 2015; Bondes and Johnson, 2017). These connections cultivate a shared sense of grievance that can mobilize more people to resist government actions. Therefore, individual-level grievances can act as a catalyst for broader social protest.

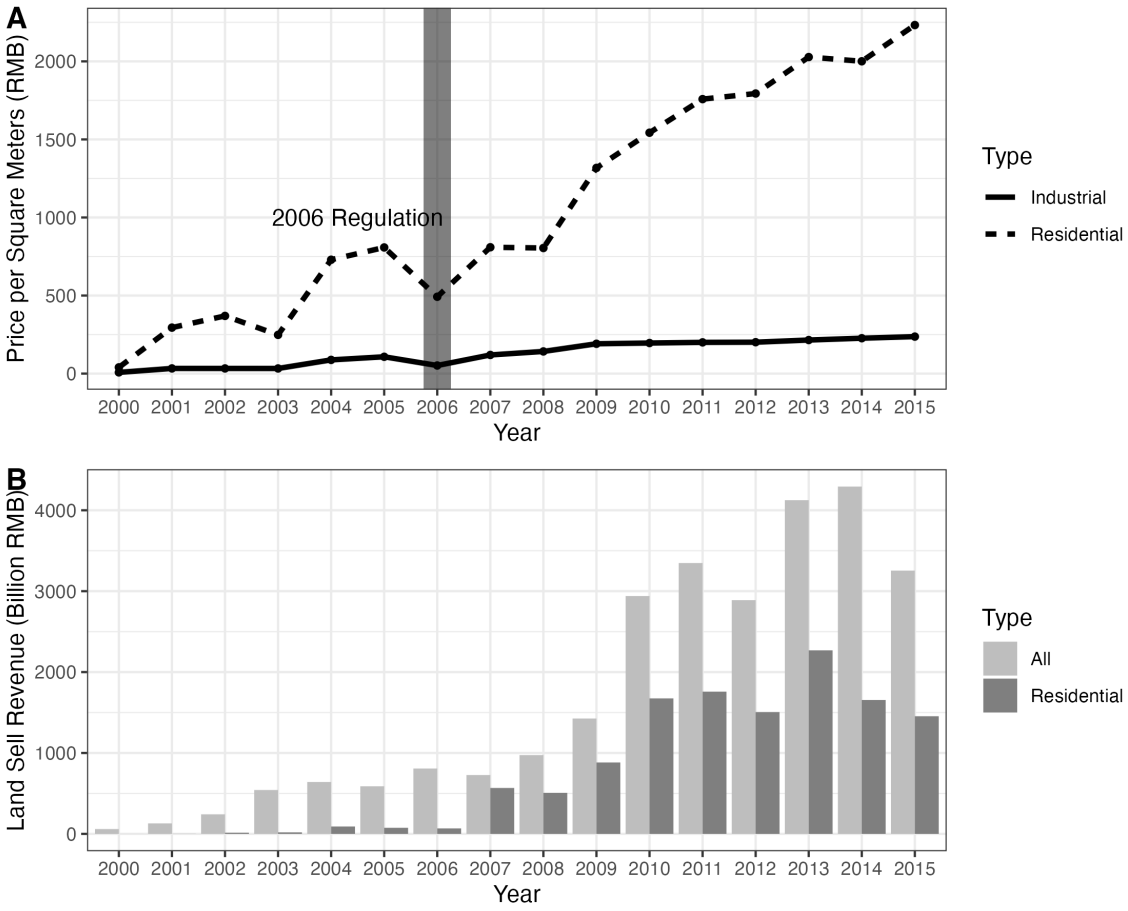
In summary, the theoretical discussion above yields the following testable hypotheses. First, local party secretaries with high career incentives tend to increase residential land prices. Second, career-seeking politicians lead to escalated collective actions regarding land issues, with land price intervention being the channel through which career incentives influence collective actions. Third, if citizens' tendency to engage in collective actions is influenced by the degree of distributive justice, then the greater the inadequacy of land compensation received by land-losing citizens, the more likely they are to conflict with local authorities. Finally, the distributional injustice should also increase the inclination of citizens living in the same community to have conflict with government officials.

3 Land Market in China

In accordance with the Constitution of the People's Republic of China, urban land is designated as state-owned, while rural land falls under the ownership of the "collective." However, the economic reforms initiated in 1978 prompted the central government to respond to the financial constraints posed by urbanization and industrial development. Inspired by the practices observed in Hong Kong, a decision was made to transform land into a tradable commodity, leading to the initiation of the land market wherein land use rights could be leased to interested parties. This transformation was first piloted in the Special Economic Zones during the early 1980s and subsequently extended to all local governments after 1988 (Ding, 2003).

In 1988, an amendment to both the Constitution and the Land Administration Law by the central government introduced a separation between land use rights and land ownership. This revision preserved the state's land ownership to prevent potential political upheaval while simultaneously laying the groundwork for the establishment of a land market in China (Cheng, 2020). Local governments were conferred with a monopoly over the supply and leasing of lands through the primary market. Individuals in the urban area are only allowed to transfer land use rights through the secondary market. Additionally, any rural lands that are intended to be sold in the primary market for urban development must first be acquired by local governments and then sold to the potential users (Ding, 2003).

Figure 2: Average Land Price in RMB per m^2 and Land Revenue for Local Government



Notes: The figure in panel A shows the average industrial and residential land prices between 2000 and 2015. Panel B shows the total government income from land sales. Land prices are calculated based on the author's own data, and the land revenue data comes from the Chinese Statistical Year Book.

The central government assigned full ownership of land transfer fees to local gov-

ernments after the 1994 fiscal reform (Rithmire, 2017). The land market became extremely vulnerable to local elites' capture after local governments became the de jure owners of the land (Mattingly, 2016; Sargeson, 2016; Jiang and Zeng, 2020). Local governments are encouraged to manipulate residential land prices to gain revenue from land sales. Figure 2 demonstrates the rising residential land prices and revenues from land sales. Panel A illustrates a substantial rise in residential land prices post-2006, in contrast to the relatively modest changes in industrial land prices. Meanwhile, Panel B underscores the tremendous revenues local governments obtained from selling residential land; nearly half of the land sale revenues come from residential land.

4 Data

This paper studies the political incentives of party secretaries in prefecture-level cities and their effect on land prices and political outcomes. To this end, I compiled a data set including 1) land transaction data, 2) local party secretaries' biographic data, 3) economic development indicators and protest data at the prefecture level, and 4) survey data on conflict with local government officials from China Family Panel Studies (CFPS).

Land Transaction Data: I obtained land transaction data from the China Land Transaction Monitoring System website.[9] It maintains records of land transactions in every locality. I web-scraped all the land transaction records between 2000 and 2015 and obtained approximately 1.5 million land transaction records. Each observation represents a piece of land sold by local governments. Each transaction includes the transaction price, date of transaction, land location, buyers, area of the plot, intended usage of the land, selling methods, and land quality. In this paper, I used only residential land, totaling 600,000 observations. I then used Baidu Map API to geolocate all land transactions and calculate their distances to borders, city centers, and railway stations.

Local Leader Data: City leader biographic data came from the Chinese Political Elite Database (CPED), collected by Jiang (2018). The data includes all biograph-

[9]https://www.landchina.com/

ical information of prefecture party secretaries between 2000 and 2015, which was compiled from government websites, provincial and city yearbooks, and other authoritative internet sources. This biographical information records the time, places, organizations, and administrative ranks of every mayor or party secretary throughout their entire careers. Using this biographical information, I matched each person in the database with cities where they served as party secretaries to construct city-person-year panel data from 2000 to 2015. Except for personal background information such as their sex and ethnicity, I also constructed variables to indicate whether they had political ties with upper-level government officials, work experience in state enterprises, or the Communist Youth League. All constructions are based on procedures from existing literature (Opper, Nee and Brehm, 2015; Jiang, 2018).

City-level Data: I also constructed a city-year panel data on prefecture-level GDP growth rate, fiscal revenue, foreign direct investment, and total population from China City's Statistical Year Book. Protest data comes from the CASM-China dataset collected by Zhang and Pan (2019), where they obtained collective actions between 2010 and 2017 in China from social media using machine learning algorithms. Their algorithm has an advantage in identifying rural and land-related protests, making it more suitable for my analysis. Based on the label they created for each protest event, I used the keywords "land" to identify all protests related to land from 2010 to 2015, and then aggregate to city-year level.

Survey Data: To evaluate how land expropriation and distributional inequality influence regime stability and legitimacy at the individual level, I use survey data from China Family Panel Studies (CFPS), a nationally representative and longitudinal dataset of Chinese communities, families, and individuals. I use four waves of data for both adults and their children spanning from 2010 to 2016, focusing on their answers to the question of "Whether you had conflicts with local government officials in the past year." Based on their response, I constructed a dummy variable with 1 means had conflicts with local government officials before and 0 otherwise.

The questions I used to construct distributional inequality measures are based on the survey conducted in 2010 at the family level; 1) whether they experienced land

requisition or not, 2) the area of land requisition, and the compensation they received. If a family experienced land expropriation, all their family members will be coded as 1 across all four waves and 0 otherwise. The compensation gap is measured by the difference between the compensation land-losing respondents received per square meter and the average land market value per square meter sold by local governments in each survey year.

In total, I collected political and economic information on nearly 320 of China's 333 city-level jurisdictions. Table A.1 and Table A.2 in the Appendix section A provide summary statistics for party secretaries, land, and survey respondents.

5 Measurement

In this study, the primary independent variable is the career incentives of city leaders. Guided by the methodologies outlined by Wang, Zhang and Zhou (2020) and Fang, Li and Wu (2022), I construct a career incentive index, including a range of factors that influence the career advancement of party secretaries. Existing literature identifies several key factors of political selection in China, such as political leaders' personal characteristics, economic performance, and factional affiliations (Li and Zhou, 2005; Shih, Adolph and Liu, 2012; Jia, Kudamatsu and Seim, 2015; Landry, Lü and Duan, 2018). Building on these findings, I use a set of variables to estimate the ex-ante promotion probability of city party secretaries. First, I create a dummy variable to indicate whether a party secretary is promoted in a given year based on whether that person was promoted to a vice-provincial position with an active role. These positions include vice-provincial level positions in the provincial or central government party branches, executive branches, judicial branches, state councils, the Communist Youth League, and state-owned enterprises. I, then, regress the promotion variable on several predictors: the age of the local leaders, their age at the onset of their tenure as party secretaries, educational background, prior work experience, factional connections with provincial leadership, and the average GDP growth during their incumbency. Finally, I use the estimated coefficient to predict the ex-ante promotion

probability for each city leader in a given year.

To improve prediction accuracy, I employ cross-fitting——a state-of-the-art machine learning technique that is well suited for prediction tasks. The data is divided into five subsamples, with each one sequentially used to train the model while the remaining are used for prediction. This process is iteratively conducted for all five subsamples, and the predictions are then averaged to produce the final prediction. Existing literature shows that cross-fitting effectively reduces overfitting and improves prediction accuracy (Chernozhukov et al., 2018; Nie and Wager, 2021).

I utilize two statistical models to estimate the probability of promotion: the generalized kernel regularized least square (gKRLS) developed by Chang and Goplerud (2023), and a probit model. The main paper employs the gKRLS model for constructing the promotion index due to the model's ability to mitigate the stringent functional form assumptions typically required in linear model estimations. For instance, consider the scenario where a local leader's career advancement is influenced by a combination of factors: age, factional ties, and economic performance. In traditional modeling approaches, capturing the interplay among these variables requires the inclusion of multiple interaction terms. However, the gKRLS model efficiently handles potentially complex relationships between variables by using kernel functions, which inherently account for intricate relationships among covariates without the need for specifying each interaction explicitly.

Section B in the Appendix presents the marginal effects and estimated coefficients for both models, while Figure B.1 in the Appendix illustrates the distribution of party secretaries' ex-ante promotion probabilities from gKRLS model.

6 Empirical Results

To test my theoretical argument, I follow a three-step process. First, I analyze the impact of career incentives on residential land prices and conduct several robustness checks to validate these findings. Second, I explore the extent to which career incentives influence local protest events through land price manipulation by employing

causal mediation analysis. Lastly, I utilize survey data to show that distributional injustice plays a significant role in shaping citizens' likelihood of engaging in conflicts with local officials.

6.1 Career Incentives and Land Prices

I use the following model to identify the effect of career incentives on residential land prices.

$$p_{ilt} = \beta_1 \textit{Career Incentives}_{slt} + \Theta X_{ilt} + \alpha_l + \gamma_t + \delta_s + \epsilon_{ict} \tag{1}$$

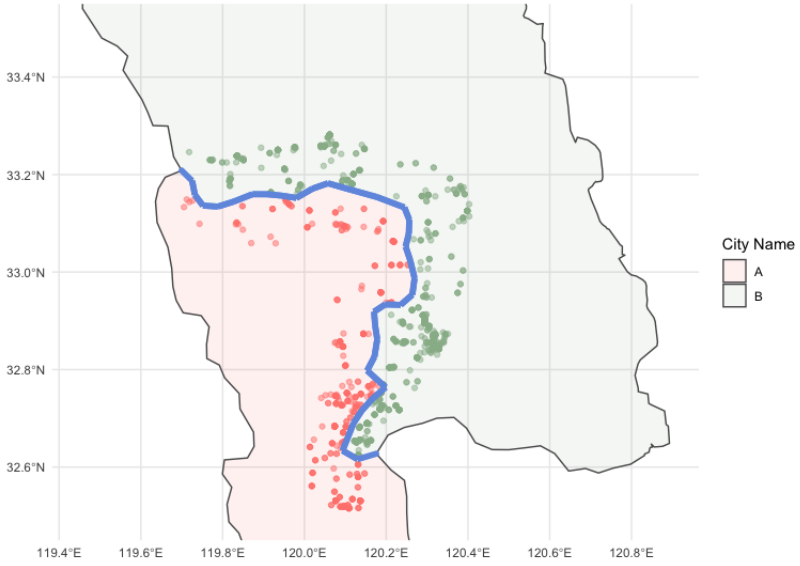
Where p_{ilt} is the price for land i in the location l sold in time t. $\textit{Career Incentives}_{slt}$ is the career incentive for the part secreatry s in the location l. X_{ilt} is a vector of land-level control variables, including land distance to city centers and railway stations, nightlight density 1km around the land, land quality, auction methods used to sell the parcel, and land sources.[10] Land quality and distance to city and rail stations are time-invariant factors that decide the intrinsic value of the land. Nightlight density and population around 1km of the land are used as proxies for economic development. Land-selling methods are used to control market forces. Adding parcel-level control variables helps to reduce the estimation biases due to the plot-level heterogeneity.

To address leader-specific and time-specific heterogeneity in the analysis, I incorporate leader fixed effects, denoted as δ_s, and quarter fixed effects, represented by γ_t. I investigate variations in land prices both within individual cities and across city borders by using different fixed effects, α_l. Specifically, by applying city-level fixed effects, the analysis focuses on how changes in land prices are associated with variations in the career incentives of local leaders within the same city. Alternatively, when adopting border fixed effects, the analysis is confined to cities that share common borders, allowing for the investigation of land price variations attributable to differences in promotion chances across adjacent cities. Accordingly, standard errors

[10] Land quality, assessed by the local government, is an overall evaluation of a parcel of land based on the area's economic prosperity, population density, traffic conditions, and infrastructure conditions. According to the Land Resources Bureau's criteria, there are fifteen levels of land quality. Level one represents the highest land quality, such as land in Shanghai and Beijing's central business district, whereas level fifteen represents the lowest land quality. Land sources refer to whether the land is converted into farmland or comes from existing constructed land.

are clustered at the city level for models analyzing within-city variations, and at the border level for models assessing cross-border variations.

Figure 3: Data for Identifying Promotion and Competition Effects



Notes: This figure is a visualization of the identification strategy for controlling for land-level heterogeneity.

One challenge of leveraging cross-border variation is the potential biases stemming from heterogeneity at the city and land level. The price of a particular piece of land is influenced by various factors, including its location, the quality of infrastructure and amenities, as well as demographic characteristics. Building upon previous studies on estimating the effects of land regulations across borders (Bayer, Ferreira and McMillan, 2007; Turner, Haughwout and Van Der Klaauw, 2014), I use land transactions across city borders to reduce the bias due to the land- and city-level heterogeneity. I use Figures 3 to demonstrate my rationale. Suppose two cities, A and B, are divided by a border. If I restrict the data to land transactions that cross borders, it ensures that land characteristics, economic conditions, and demographic factors are approximately identical.

Table 1 reports results based on the above identification strategy. Columns (1), (3), and (5) offer estimations without adding any land-level controls, while columns (2), (4), and (6) include a full set of control variables. In addition, columns (3) and (4) show cross-border estimations using all data, whereas columns (5) and (6) focus

Table 1: Career Incentive on Land Prices (RMB per m^2)

	Within-city		Cross-border			
					Distance <= 8km	
	(1)	(2)	(3)	(4)	(5)	(6)
Career incentive	45.934***	51.081***	34.444***	38.662***	28.874***	33.263***
	(11.742)	(10.747)	(7.671)	(7.338)	(10.821)	(10.817)
Dep. var. mean	907.24	907.40	907.26	907.41	835.33	835.33
# of observations	466751	466601	466733	466584	103649	103647
Adjusted R^2	0.38	0.40	0.41	0.43	0.43	0.44
# of Borders	-	-	-	786	694	694
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Leader FE	Yes	Yes	Yes	Yes	Yes	Yes
City FE	Yes	Yes	Yes	No	No	No
Border pair FE	No	No	No	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes

Note:

[1] Control variables include land quality evaluated by the local government's land bureau, land auction methods (English auction, two-stage auction, invited bidding), land distance to railway stations, distance to the city center, population density, and night light density.

[2] Standard errors clustered by cities for within-city estimations and by borders for cross-border estimations. *p<.10; **p<.05; ***p<.01.

on data limited to areas within 8km of borders. The career incentive index is standardized, allowing the interpretation of coefficients as the impact of a one standard deviation increase in the career incentives of local political leaders on residential land prices. The results from column (1) indicate that a one standard deviation rise in career incentive corresponds to an increase of 46 RMB per square meter in residential land prices. With the inclusion of all control variables, this effect increases to 51 RMB ($\approx$ \$7) per square meter. It's important to note that the within-city coefficients reflect the impact of career incentives for the same party secretaries within the same city. Columns (3) through (6) utilize cross-border variations in career incentives among different leaders in different cities. The findings are consistent with the within-city estimations, albeit slightly lower. For instance, the model in column (4), which includes all control variables, shows that a one standard deviation increase in career incentive leads to a 39 RMB ($\approx$ \$6) per square meter rise in land prices. The results in columns (5) and (6), which use data from areas within 8km of the border to further minimize biases originating from city and land-level heterogeneity, provide approximately the same estimations as those in column (4). Overall, all results in-

dicate that city-level party secretaries intend to inflate residential land prices when their career incentives increase.

6.2 Alternative Explanations and Robustness Checks

Alternative Explanations: Local leaders' propensity for rent-seeking behavior may lead them to manipulate land prices. Existing research highlights that one way local leaders can benefit personally is by choosing less transparent auction methods to sell land to preferred companies and obtain personal gain from the companies (Cai, Henderson and Zhang, 2013; Chang, 2023). Consequently, if corruption is the primary driver behind land price manipulation, it would be expected that local leaders are more inclined to select less transparent auction methods. Table C.1 in section C of the Appendix provides results regarding the impact of career incentives on the selection of auction methods. The results indicate that local leaders with higher career incentives are more likely to select transparent auction methods, indicating that rent-seeking is not a plausible explanation.

An alternative hypothesis could be that upper-level leaders strategically place local leaders in areas with rich land resources, enabling them to manipulate land prices. However, this concern is mitigated by the within-city research design, which focuses on the effects of career incentives for the leaders within the same city. The literature also points out that local governments' fiscal deficits and their capacity to attract foreign investment are significant factors in land price manipulation (Whiting, 2011; Gyourko et al., 2022; Rithmire, 2015). To address these issues, I have included local governments' fiscal gaps and the total Foreign Direct Investment (FDI) received as control variables in my analysis. The results of this are detailed in the Appendix section C.1. In summary, the collective evidence from these robustness checks indicates that the main findings remain consistent.

Robustness Checks: I also conduct several robustness checks. First, the career incentive index is reconstructed using predictions from a probit model to estimate the effects of career incentives, with results detailed in Appendix Table C.3. Second, acknowledging that land policies and the availability of land across cities could influ-

ence both politicians' career incentives and land prices, land supply is included as a control variable in the analyses. The outcomes are available in Appendix C.1. Lastly, a permutation test was employed as a placebo test to verify the effects of career incentives. The procedures and outcomes of this test are documented in the Appendix section C.3. In summary, the results from these robustness checks are consistent with findings in Table 1.

6.3 Career Incentives and Protest

This section explores the role of land price manipulation as a mediator in the relationship between career incentives and the frequency of protests. The unit of analysis in this study is city because protest data are aggregated at the city level. Employing the mediation analysis framework by Imai, Keele and Tingley (2010), this study examines to what degree the impact of career incentives on protests is channeled through changes in residential land prices. The analytical approach consists of two parts: a mediator model that assesses the connection between the career incentives of local leaders and residential land prices at the city level, and an outcome model that looks at how both land prices and career incentives affect the number of protests. This approach facilitates the separation of the total effect of career incentives on protests into two segments: the direct influence of career incentives on protests, and the indirect influence mediated through changes in land prices. The specifications for the mediator and outcome models are as follows:

Mediator model:

$$Land\ Prices_{ct} = \beta_1 Career\ Incentive_{sct} + \Theta X_{ct} + \alpha_p + \gamma_t + \epsilon_{ct} \tag{2}$$

Outcome model:

$$Protest_{ct} = \beta_2 Land\ Prices_{ct} + \beta_3 Career\ Incentive_{sct} + \Omega X_{ct} + \alpha_p + \gamma_t + \epsilon_{ct} \tag{3}$$

$Land\ Prices_{ct}$ denotes the residential land price in city c during year t. $Career\ Incentive_{sct}$ represents the standardized career incentive index for party secretary s in city c at year t. $Protest_{ct}$ refers to the number of protests in city c during year t. I analyze two categories of protests: the total number of protests and those specifically related

to land issues. To demonstrate that protests pose real threats to regime stability, I further distinguish within each category between violent protests and disruptive protests, as classified by Zhang and Pan (2019).[11] X_{ct} is a vector of covariates, including GDP per capita, total FDI, and fiscal deficit of local governments. α_p and γ_t represent fixed effects for province and time, respectively.

Table 2: Career Incentives, Land Prices, and Protest

	Mediator Model	Outcome Model					
		Protest			Land Protest		
	Land Price	Total	Violence	Disruptive	Total	Violence	Disruptive
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Land price		21.701***	7.631***	6.228***	12.526***	5.394***	2.798***
		(2.989)	(1.026)	(0.786)	(1.592)	(0.742)	(0.333)
Career incentive	81.056**	5.089***	1.825***	1.394***	2.490**	1.497***	0.836***
	(34.933)	(1.811)	(0.647)	(0.468)	(0.991)	(0.512)	(0.243)
Observations	1,205	1,205	1,205	1,205	1,205	1,205	1,205
Adjusted R^2	0.469	0.481	0.404	0.402	0.451	0.379	0.372
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
City Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

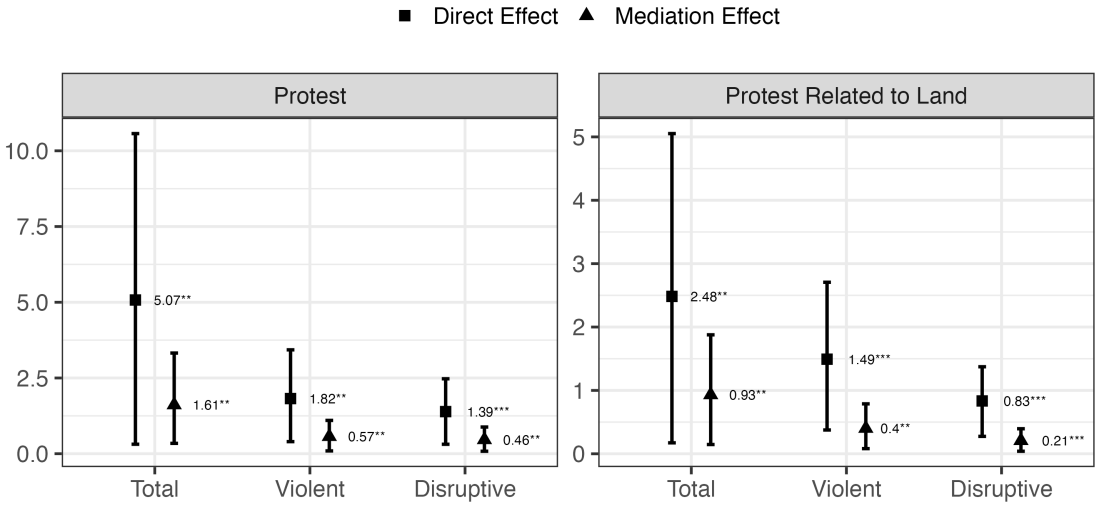
Note:
[1] City-level controls include GDP per capita, FDI, and fiscal deficit.
[2] Standard errors clustered by cities in parenthesis. *p<.10; **p<.05; ***p<.01.

Table 2 displays the estimation results from the mediator and outcome models. The coefficient in the mediator model indicates that a one standard deviation increase in career incentives results in an 81 RMB (≈ $12) per square meter increase in residential land prices, which is consistent with the findings from the previous section. The coefficients for career incentive in outcome models can be interpreted as the direct effect of local leaders' career incentives on protests since they controlled for the mediator and land prices. For instance, the findings in columns (3) and (4) suggest that a one standard deviation increase in career incentives has a direct effect of 1.8 and 1.4 on violent and disruptive protests, respectively.

Next, I perform a causal mediation analysis to distinguish between the average direct effect and the average causal mediation effect. This analysis requires selecting values for the control and treatment conditions. In this study, I select the 25th percentile and the 90th percentile of the career incentive index as the control and

[11] Violent protests include armed attacks and physical conflicts with government officials, while disruptive protests encompass actions such as occupation of buildings, occupation of land, construction of barricades, and cutting off power supplies.

Figure 4: Direct and Mediation Effects



treatment values, respectively. Figure 4 visually presents the results of this analysis. To determine the total effect of career incentives, one must sum the direct effect and the mediation effect. For violent protests, the results indicate that the average direct effect of career incentive is 1.82, while the mediation effect through land price manipulation is 0.6. This implies that approximately 24% of violent protests are mediated through land price manipulation. A similar proportion of the mediation effect, around 25%, is observed in disruptive protests. When applying this calculation to violent and disruptive protests related to land, the results show that 21% and 20% of the effects of career incentives, respectively, are mediated through changes in land prices. Overall, the mediation analysis reveals that local leaders' career incentives lead to increased collective actions in China, and crucially, land price manipulation serves as one of the mechanisms through which career incentives influence the outbreak of protests.

When calculating the effect of causal mediation, the key presumption is the sequential ignorability. This assumption comprises two main parts: first, the career incentive of local leaders is assumed to be independent of both potential outcomes and land prices once observed pre-treatment confounders are accounted for. Second, the assumption holds that the observed mediator is unaffected by both the treatment and any pre-treatment confounders. However, it's important to note that this

assumption is not verifiable using observed data. Following Imai et al. (2011) suggestions, I conduct several sensitivity analysis to evaluate the reliability of the causal mediation analysis. The Appendix section D details the procedures for sensitivity analysis.

6.4 Effects of Compensation Gap on Conflict

The empirical findings presented thus far establish a causal relationship between career incentives, land prices, and protests. However, the specific mechanism by which land price manipulations affect individuals' decisions to protest remains less clear. As discussed in the section 2.3, one key issue is the inadequate compensation provided by local governments to citizens during land expropriation. This occurs despite the fact that governments sell land at high prices, resulting in significant rent disparities between the government and the citizens. Such distributional injustice heightens local citizens' resentment towards local authorities, often leading to conflicts with officials. To investigate this distributional injustice mechanism, I utilize survey data from the CFPS. More specifically, I employ the following model to assess the impact of under-compensation on the likelihood of citizens engaging in conflicts with local officials:

$$\text{Conflict}_{it} = \beta_1 \text{Compensation Gap}_{it} + \Theta X_{it} + \alpha_i + \gamma_t + \epsilon_{it} \tag{4}$$

The political outcomes for the person i at year t are constructed based on survey questions discussed in Section 4. The compensation gap is measured by the difference between land-losing respondents' compensation and provincial average residential land prices in a given year.[12] It is important to note that the compensation question was only asked in the 2010 survey. Therefore, I leverage two variations in the compensation gap variable. The first variation is compensation differences across families. The second is the variation in residential land prices across provincal-years. The assumption is that respondents can infer the compensation gap based on residen-

[12]Due to data usage policy, the China Family Panel Studies only allows users to identify respondents' addresses at the provincial level.

tial land prices, and the higher the land prices, the wider the gap they perceive.[13] X_{it} is a vector of time-varying variables for respondents. Finally, I add α_i and γ_t as fixed effects to control for individual-level and time specific heterogeneity. All standard errors are clustered at the family level.

Table 3: Effects of Compensation Gap on Conflict

	(1)	(2)	(3)	(4)
Compensation Gap	0.037**	0.042**	0.045**	0.045**
	(0.017)	(0.018)	(0.018)	(0.019)
Dep. var. mean	0.096	0.099	0.099	0.099
# of observations	9483	8492	8492	8492
Adjusted R^2	0.140	0.127	0.133	0.133
Individual fixed effects	Yes	Yes	Yes	Yes
Village FE	Yes	Yes	Yes	Yes
Individual Controls	No	Yes	Yes	Yes
Time FE	No	No	Yes	Yes

Note:
[1] Individual level controls include gender, age, college degree, employment status in the government sector, membership in the Chinese Communist Party, living in rural or urban, and homeowner status.
[2] Standard errors clustered by households in parenthesis. *p<.10; **p<.05; ***p<.01.

Table 3 displays the results. The independent variable is standardized, so the coefficients should be interpreted as the effect of a one standard deviation increase in the compensation gap on the probability of survey respondents engaging in conflicts with local government officials. Column (1) presents the baseline model, which includes only individual and village fixed effects and no control variables. It indicates that a one standard deviation increase in the compensation gap raises the probability of individuals having conflicts with local government officials by 3.7%. In Column (2), I incorporate several individual-level control variables that could affect the likelihood of conflict, such as gender, age, college degree, house ownership, and income level. The result increases slightly to 4.2%, higher than the model without controls. Column (3) further adds time fixed effects to account for any time-invariant

[13]This assumption is supported by the fact that the main reason for violence during land expropriation is the potential financial gain from urban development (Sargeson, 2016). Employing a similar methodological approach, Cai et al. (2020) conducted a study that used the difference between housing prices and compensation as a measure for compensation gaps to examine peasants' opposition to land expropriation.

heterogeneity, and the result remains relatively unchanged. It is noteworthy that the average probability of having a conflict with government officials in the entire sample, which includes respondents who have and have not experienced land expropriation, is 8%. The estimations presented in Columns (1) to (3) suggest that a one standard deviation increase in the compensation gap increases the incidence of experiencing conflicts with government officials by approximately 50%.

Several confounding variables may impact the respondent's compensation gap and the probability of engaging in conflicts with government officials. According to existing literature, factors such as membership in the Chinese Communist Party, representation in local and national congresses, and employment in government sectors can provide individuals and firms' some degree of legal protection against state intrusion (Dickson, 2007; Li et al., 2008; Ang and Jia, 2014; Hou, 2019). In the context of this study, such factors might reduce the probability of receiving insufficient compensation and lower the likelihood of conflicts with government officials. To account for these factors, the model in column (4) includes variables for party membership and government employment as additional control variables. However, the coefficient associated with the compensation gap remains positive and statistically significant.

6.5 Spillover Effects

Lastly, it is important to investigate whether individuals who have been under-compensated can influence respondents who have not experienced such events. This exploration is crucial because if the spillover effect is significant, it increases the likelihood that an isolated land expropriation conflict could escalate into collective actions against government intrusion. To examine this possibility, I aggregate the instances of under-compensation at the village level, using this as a measure of the intensity of exposure to under-compensation for those respondents who, although not directly expropriated, reside in the same village. This approach aims to capture the broader impact of under-compensation within a community and its potential to incite collective dissent. The statistical model employed for this analysis is the same as that outlined in equation 4.

Table 4: Spillover Effects of Compensation Gap on Conflict

	(1)	(2)	(3)	(4)
Compensation Gap	0.008***	0.010***	0.010***	0.011***
	(0.003)	(0.003)	(0.003)	(0.003)
Dep. var. mean	0.074	0.077	0.077	0.077
# of observations	84475	76114	76114	75802
Adjusted R^2	0.115	0.120	0.125	0.125
Individual fixed effects	Yes	Yes	Yes	Yes
County FE	No	No	No	Yes
Individual Controls	No	Yes	Yes	Yes
Time FE	No	No	Yes	Yes

Note:

[1] Individual level controls include gender, age, college degree, employment status in the government sector, membership in the Chinese Communist Party, living in rural or urban, and homeowner status.

[2] Standard errors clustered by households in parenthesis. *p<.10; **p<.05; ***p<.01.

The results are presented in Table 4. In Column (1), the results are reported with individual fixed effects and without control variables. Column (2) incorporates individual-level control variables, while Column (3) includes time fixed effects. Lastly, Column (4) adds county fixed effects to address any county-level heterogeneity. The results across these specifications are almost identical, indicating that a one standard deviation increase in exposure to under-compensation enhances an individual's likelihood of engaging in conflicts with government officials by 1%. Considering that the sample mean is approximately 8%, this suggests that exposure to under-compensation increases the likelihood of non-expropriated individuals engaging in conflicts with government officials by 13%. This significant increase underscores the potential for isolated incidents of land expropriation to escalate into more widespread collective actions against government authorities.

In summary, the estimates shown in Table 3 and 4 indicate that distributional injustice is a crucial mechanism prompting individuals to engage in conflicts with government officials. The Appendix section E offers two additional sets of results concerning the impact of the compensation gap on trust in and evaluation of local government. Results are consistent with the theoretical argument. Furthermore, I perform a placebo test on outcome variables that should not be influenced by the

compensation gap to assess the robustness of the results. Results are shown in Table E.2. I observed no effects of the compensation gap on these two outcome variables, indicating that the observed effects in conflict are likely not due to spurious correlations.

7 Conclusion

This paper demonstrates that institutionalized promotion within a party system in an authoritarian regime can increase conflicts between ruling elites and non-elites, thereby reducing regime stability. I argue that the career incentives of politicians within party systems incentivize violations of non-elite property rights, escalating conflicts between governments and citizens. By combining data from residential land transactions and career records of local politicians, I demonstrate that politicians with high career incentives tend to mobilize state-owned resources to accomplish their political goals. However, such a strategy hinges on amassing enough resources,thereby incentivizing local leaders to violate the property rights of non-elites. Using prefectural-level land price data and protest data, I show that career-seeking politicians contribute to heightened collective action on land issues, with land price intervention serving as the channel through which career incentives impact collective actions. Finally, evidence based on multiple national surveys indicates that distributional injustice acts as a pivotal factor driving conflicts between citizens and governments.

What is the equilibrium outcome of land price interventions on economics and politics? Moreover, how should local governments achieve a delicate balance between benefits and costs? Addressing these questions extends beyond the scope of this paper. However, considering all the evidence from this paper and existing literature, it seems that the current political promotion system has begun to impede political development despite its initial contribution to economic development.

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