

MIGRATION, PARTICIPATION, AND TAXATION IN RURAL CHINA

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ANSTRACT

In this article, I analyze an ordinary form of political participation under an authoritarian regime in rural China. I present a game-theoretic model that reformulates and extends Albert Hirschman's *Exit, Voice, and Loyalty* argument to analyze politics in rural China. I explore how rural-to-urban migration and the petition system may strengthen ordinary people's power vis-à-vis the China's authoritarian regime. My model shows that allowing rural residents to migrate from their local villages and to petition against their local governments does not necessarily give local officials incentives to provide public goods, but strengthens the central government's authority to control the local governments. My model's argument suggests that contrary to Tiebout's argument, internal migration does not necessarily motivate local governments to provide public goods unless democratic institutions get local officials responsive to popular preferences.

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In rural China, as elsewhere in an authoritarian regime, the state aggregates popular preferences poorly, and people often become frustrated with existing opportunities for political participation (e.g., Bernstein and Lü 2003; Kelliher 1992; O'Brien and Li 2006; Tsai 2007; Yang 1996). While popular grievances for a modicum of responsiveness from the authoritarian state have received a lot of attention, authoritarian regimes in some occasions respond positively to the demands of their citizenry. How can ordinary people strengthen their position vis-à-vis the authoritarian state?

To answer this question, I introduce a game-theoretic model to analyze an ordinary form of political participation in rural China. Scholars on Chinese rural politics have examined how the institutionalization of political participation interacts with various local socio-economic conditions—such as: geographic conditions (e.g., Bernstein and Lü 2003), legacies of the Maoist period (e.g., Pan 2003; Whiting 2001), roles of social networks (e.g., Tsai 2007), and personal competence of the leadership (e.g., Gilley 2001). An institutional change that has so far received little attention is internal migration from rural to urban areas. Although quite a few studies have examined the effects of rural-to-urban migration on urban governance (e.g., Solinger 1999; Zhang 2001), few studies have examined its effects on rural governance. Since the 1980s, the relaxation of migration policies has enabled more than 100 million villagers to enter cities to work in factories, construction sites, or service industries in pursuit of higher wages and improved living conditions. Has the increasing possibility of outbound migration limited predatory behavior that state officials might take otherwise?

The model in this article reformulates and extends Alberto Hirschman's (1970) argument of *Exit, Voice, and Loyalty* to explore the effects of allowing outbound migration on the state's response to the local people. Hirschman argued that when people angered in a society, they

might not only voice their dissatisfactions but also exit from their society, and hence that both voicing (participation) and exiting (migration) should be at work in the protests possible within the organization such as the state. Clark et al. (2007) and Gehlbach (2006) point out that while Hirschman's argument has generated enormous amount of work in political science and other disciplines of social sciences, only a few studies have extended his argument to formal-modeling analyses. Among the studies using game-theoretic models, the game presented here bears a superficial similarity to that modeled by Clark et al. (2007) in that they explicitly formalize exit, voice, and loyalty as choices for ordinary people to take action against the state. However, it differs from their highly stylized positive model in that the institutional features of the game here have been identified through my field research in rural China.¹

The explanation in this article builds on the assumption that even authoritarian regimes are concerned with popular support to remain in power. As a result, almost all the authoritarian regimes actually have some forms of democratic institutions. Studies focusing on democratic institutions in authoritarian regimes have argued that democratic institutions such as parties and elections are a central part of the regime's survival strategy (e.g., Brownlee 2007; Lust-Okar 2005; Magaloni 2006). In this article, to explore the roles of democratic institutions in the context of authoritarian politics, I focus on one of the important channels for political participation in rural China: petitions. Instead of elections, I select the petition system for

¹ Most of my field research was conducted in 2004-05. I conducted field interviews with more than a hundred local officials and villagers in 40 villages across seven out of China's 31 provinces (i.e. Guangdong, Guizhou, Hebei, Hubei, Hunan, Jiangxi, and Zhejiang). The seven provinces include both the richest ones located in the coastal regions (such as Guangdong and Zhejiang) and the poorest ones located in the inland regions (such as Guizhou). The list of the interviewees is available from the author upon request.

emphasis for the following reasons: (1) petitions are widely used in rural China to express popular grievances against various levels of local governments while elections are limited to the village level; (2) ordinary villagers often find elections to not solve their grievances but generate them; and (3) instead of seeking solution by electing their representatives, people apparently prefer solving their specific grievances directly. In short, Chinese rural residents have arguably found the petition system as a more effective means to raise their demands than elections.

From a few assumptions plausible in the context of Chinese rural politics, the model in this article derives the following implications. First, the increased possibility of outbound migration would initially give rural residents greater bargaining power with local officials, imposing implicit threat that they would leave the village if officials do not respond positively to their demands. However, as the fiscal burden caused by responding to popular demands (such as lowering taxes or providing public goods) brings a local government to an undesirable threshold (such as a decrease in tax revenue by lowering taxes or an increase in fiscal expenditure to provide public goods), local officials would endure petitions or exodus of the residents without responding to popular demands. When the locality reaches this undesirable threshold depends on its economic conditions. The localities with high potential for development could postpone the threshold while those with low potential would face the threshold sooner. Second, institutionalization of the petition system also has different consequences on the provision of public goods, depending on the local economic conditions and effectiveness of the exit option. When local conditions are favorable for development, both the exit option (potential migration) and the voice option (potential petitions) would work to pressure officials to respond to popular preferences, so that rural residents would stay in the village to pay taxes and officials would not be troubled about petitions. When local conditions are not favorable, neither the exit option nor

the voice option would work to prevent officials from predatory behavior; for they would have neither an incentive nor a capacity to respond to popular demands. Interestingly, the exit option would *decrease* the provision of public goods if the locality lacks potential for development.

This article proceeds as follows. The first section reviews the state's provision of public goods in rural China. The second section discusses the institutional features of migration, participation, and taxation to understand Chinese rural politics in Hirshman's framework of exit, voice, and loyalty. The third section formalizes the description in a game-theoretic model and solves it for equilibrium, and then the fourth section models relevant post-Mao institutional reforms as shifts in the model's parameters. The fifth section concludes.

THE PROVISION OF PUBLIC GOODS IN RURAL CHINA

The model developed in this article may account for the issues regarding the effects of migration and participation on the state's provision of public goods. Economic and political theories since Tiebout (1956) have emphasized positive effects of internal migration on the state's behavior and economic development. Tiebout argued that the ease of outbound migration should lead to competition between local governments to attract residents, investors, and taxpayers. Thus, local officials should be motivated to provide public goods cost-effectively and hence, behave as agents to efficiently achieve economic development of the whole nation.

Contrary to this optimistic view on the association between internal migration and the provision of public goods, the empirical record of rural China has generated mixed results. On the one hand, a body of the literature has emphasized the positive roles of local governments on development by their provision of public goods. According to this literature, decollectivization, fiscal decentralization, and the new institutions on property rights gave local officials strong

incentives to implement the policies that would promote economic development (e.g., Oi 1999; Oi and Walder, eds. 1999; Pan 2003; Whiting 2001). On the other hand, another body of the literature has shown disappointing pictures, in which local officials personalized their status in the state apparatus to extract existing surplus and distribute unproductive rents to their favorite groups (e.g., Bernstein and Lü 2003; Chen and Wu 2004; C. Li 2002; Pei 2006).

In the initial period of the post-Mao reform until the mid-1980s, decollectivization increased the efficiency of agricultural production, and rural industries prospered in *both* coastal and inland regions. While the trend continued in most of the well-endowed coastal villages in the 1990s, economic growth started dragging in most of the poorly-endowed inland villages in the late-1980s. Small-scale production that characterized the Chinese agriculture formed a bottleneck for the further boost of productivity. Moreover, many rural industries called township-and-village enterprises went under due to surging competition in the 1990s, which forced large numbers of local governments to go into debt (Oi and Zhao 2007; Ong 2006).

In addition to the accumulation of debt, intense pressure from the central government drove local officials in inland regions to increase fiscal expenditure to catch up with more highly developed coastal regions. However, the financial resources the central government made available for local governments were far from sufficient—especially since the fiscal reform in 1994 (Bernstein and Lü 2003; Zhan 2006). Thus, local governments in poorly-endowed areas suffered from the shortage of financial resources to meet the developmental goals given by higher authorities, and transferred the financial gap to the peasants as a variety of levies, leading many to complain—and some to protest—that local exactions took up an increasing portion of their incomes.²

² No quantitative data exist on the frequency, intensity, or types of peasants' protests in China. However,

A series of rural tax reforms since 2000, which ended up with the abolition of the agricultural tax in 2006, have not only alleviated the peasants' financial burden but also exacerbated the local fiscal crisis.³ In recent years, the local governments that relied on revenue from the agricultural tax have found their revenues to shrink and the capacity to provide public goods to weaken. Though the Chinese central leadership has an interest in allowing local officials to collect taxes and provide public goods, this interest is not as strong as that in political stability that directly relates to the regime's survival.⁴ When the two interests conflict with each other—as they did when the increase in local levies sparked rural unrest in the 1990s—the regime places its own political survival before local fiscal health.

INSTITUTIONAL FEATURES OF MIGRATION, PARTICIPATION, AND TAXATION

To better appreciate how the regime's willingness to sacrifice fiscal health for political survival, it is important to note that institutional changes during the post-Mao reform have influenced how the center orders its priorities. Before formally modeling strategic interactions from sporadic media reports and scholars' field interviews and observations, we know that there were thousands of contentious episodes in the Chinese countryside in the 1990s. For a review of the relevant literature, see O'Brien (2002).

³ Scholarship and media reports on the rural tax reform since 2000 have proliferated. For instances, see Kennedy (2007), Oi and Zhao (2007), and Yep (2004).

⁴ The central government may have an interest in allowing local governments to collect taxes and provide public goods for two reasons. First, the provision of public goods by local governments may alleviate villagers' grievances and prevent social instability. Second, the central government may find it easier to have local governments enforce the central government's preferred policies when local governments collect taxes and provide public goods effectively.

between a local government and villagers, this section considers the institutional changes of migration, participation, and taxation over the last three decades, and their influences on the availability of exit, voice, and loyalty for people's strategic choices.

Migration (Exit)

During the Maoist era (1949-76), the migration from rural to urban areas was virtually prohibited under the household registration (*hukou*) system. However, while implementing pro-market economic reform since the 1980s, the regime has relaxed regulations for rural-to-urban migration to supply a crucial source of cheap labor to a booming urban economy. It is important to note that the massive flow of rural migrants to urban areas has been the basis for rapid industrialization. Thus, tightening migration policies would eliminate an important stimulus for the industrial economy—especially for export-oriented industries. Therefore, though the population flows have presented a sizable challenge to the state's control over society, the regime has had no choice but kept the relaxation of migration policies to maintain rapid economic growth that has formed the basis for the regime's legitimacy.

The possibility of outbound migration brought an unexpected consequence: migrant peasants found it easier to resist paying levies in the local village. In rural China, the agricultural tax and most of other levies are exacted for land, not for income, and each household is allocated land regardless of whether they are farming in the village or working outside the village. Thus, local officials have to collect the levies from each household regardless of whether they are living in the village. Because of the difficulty to collect levies from those who are absent from the village, local governments have suffered from a shortfall in fiscal revenue since the 1990s.

The erosion of tax collection by outbound migration has generated a dilemma for local

officials. If local officials keep pushing non-migrant residents to pay for more levies, they will be likely to face tax resistance. However, if they leave a shortfall in fiscal revenue uncovered, they will be likely to be punished, since China's Budget Law requires that each level of government make ends meet every year and higher-level governments use a balanced budget as one of the major criteria of personnel management (Zhou 2004, chapter 5).

From the villagers' perspective, this dilemma facing local officials can be translated into an additional choice available to resist the state. Scholars on popular politics in rural China (e.g., Kelliher 1992; Zweig 1997, chapter 5) have discussed what Scott (1985, 29) defines as "everyday forms of peasant resistance," which include "foot dragging, dissimulation, false compliance, pilfering, feigned ignorance, slander, arson, sabotage, and so forth." Scott argued that although peasants are disenfranchised, weak, and unorganized, they could be powerful and influential to resist the authority in the strong state. In this sense, now that the Chinese peasants have obtained another form of resistance, the increasing possibility of outward migration should have strengthened their bargaining power vis-à-vis the state. The dilemma facing local officials suggests that the potential for outward migration generates a conflict of interest between residents and officials in rural China. Hence, the model treats part of the payoffs from rural-to-urban migration as a zero-sum game between villagers and local officials.

The model would overstate the conflict of interest between local officials and villagers if it defines the payoffs from rural-to-urban migration entirely as a zero-sum game. While local officials might face a decrease in their collected fiscal revenue along with increasing opportunities for rural residents to work outside the village, villagers might have more incentives to pay levies along with their increasing incomes. Levi (1988, 60) argues that people are willing to pay taxes more voluntarily when rulers "provide reassurance that they will deliver promised

goods and services.” This “reassurance” would arguably emerge if people have an effective means to get rulers responsive to their demands. Does the petition system get local officials responsive and give villagers an incentive to comply with taxation in rural China?

Participation (Voice)

O’Brien and Li (2006: 2) argue that over the last few decades, Chinese rural residents have increasingly engaged in what they define as “rightful resistance,” which entails “the innovative use of laws, politics, and other officially promoted values to defy ‘disloyal’ political and economic elites.” Engaging in mass demonstrations or public protests, ordinary people have become adept at using laws, rules, and institutional mechanisms that the central government created and/or legitimated to express their dissatisfaction with local governments. As the tensions between rural residents and local officials on various reform-related issues have increased, China’s authoritarian regime has actively sought to reconcile them with introducing (or revamping old) institutions for political participation, designed to give political voice—albeit limited, controlled voice—to ordinary people, hoping to ease discontent and reduce the likelihood of political instability (Bernstein, 1999). The petition system is one of these institutions.

The petition system should ideally function as follows: a superior government should be informed of popular grievances against a local government through a petition; the superior government should punish the local government if it finds that the local government has committed misconduct; to avoid being punished, the local government should *ex ante* be more compliant with laws and regulations; and being afraid of a *potential* petition, the local government should be more responsive to popular demands.

This logic corresponds with the idea of the “fire alarms” oversight, which McCubbins and

Schwartz (1984) define to be a mechanism where the principal should be notified of the agents' problems once some problems occurred, as if fire alarms should ring when they detected fire. If this oversight mechanism works, the agents' problems would rarely occur, because the agents should know that their problems would be revealed to their principal and hence they would try not to cause problems with every possible means. Therefore, the number of petitions *actually* submitted is not a good indicator of the effectiveness of the petition system. If local officials are afraid of potential petitions and enforce policies that reflect popular preferences, villagers will not petition because they are satisfied with their local officials. At the same time, when people do not petition, it may be not because they are satisfied but because they do not expect the petition system to work. This logic suggests that it is necessary to examine why people choose not to petition.

Taxation (Loyalty)

Notwithstanding the title of his book, Hirschman (1970) does not take “loyalty” as an available choice for possible popular responses but takes only “exit” and “voice” as citizens' available choices, by defining voice as a residual alternative to exit. However, it is crucial for this analysis to juxtapose loyalty as a choice available for villagers—together with exit and voice. Choosing loyalty means paying taxes and other financial levies without migrating or petitioning.

For an arrangement under which ordinary people are willing to comply with taxation, Levi (1988: 32) raises the idea of “quasi-voluntary compliance,” with which paying taxes “is voluntary in that constituents pay because they choose to...[but it] is quasi-voluntary because they will be punished if they do not.” For quasi-voluntary compliance to work, taxpayers must be reasonably certain that rulers would deliver goods upon their promise. In villages with

potential for development, local residents could more easily expect officials to deliver goods for popular preferences, because residents and officials share the common interests in local development. However, in villages with low potential for development, officials would have a short-term incentive to extract all they could from residents; thus, institutional mechanisms would be needed to assure residents that officials would follow through on their pledges to use tax revenue for the greater good (or suffer the consequences for failing to follow through on their pledges).

MIGRATION, PARTICIPATION, AND TAXATION AS A GAME

The institutional features described above are the basis for the game-theoretic model considered here. This article models a relationship between a local government and villagers as a sequential, non-cooperative game presented in extensive form (see Figure 1).⁵ The villagers take actions after the local government has decided how much to spend for providing public goods. When the local government makes a decision on the amount to be spent for the provision of public goods, it takes into consideration how the villagers will react and assumes that the villagers may take different actions depending on the amount spent for the provision of public goods. Petitions may be reviewed or ignored. The probability that petitions are reviewed is common knowledge but neither the local government nor the villagers can control it.⁶ This

⁵ Assume that all information about the payoffs and structure of the game are common knowledge.

⁶ In its basic structure, the model presented here is similar to that of Clark et al. (2007). In their model, citizens have three choices of exit, voice, and loyalty, and the state chooses to respond to their voice or ignore it. In their model the state that is the target of citizens' actions decides to respond or ignore, while

section provides a formal description of the game and solves it for equilibrium.

[Figure 1 about here]

Sequence of Moves

The game begins with the local government's decision to set a fixed amount to be spent on providing public goods, G . The model assumes that the amount to be spent on providing public goods cannot exceed the tax revenue, T (i.e. $0 \leq G \leq T$). Following the local government's move, the villagers choose a response. They select to leave the village (Migrate), turn in a petition to the superior government (Petition), or stay in the village to pay taxes (Comply). Notice that the local government cannot decide the amount of T , but the superior government gives it to the local government. This assumption implies that the local government chooses the amount for expenditure on providing public goods with the budget constraint given by its superior government.

If the villagers choose to migrate or comply, then the game ends. In the event of petitioning, the superior government may review or ignore the petition, and the probability that higher authorities respond to the petition in favor of the villagers is q . If the petition is reviewed (Successful), then the game ends with the tax reduced to the amount spent on providing public goods. In other words, the successful petition implies that the local government cannot enjoy excess revenue to be spent for private purposes. If the petition is ignored (Not Successful), then the villagers have to choose between migration and compliance.

in my model whether the petition (voice) is reviewed or ignored is determined by nature that incorporates various factors that may influence the probability that petitions are reviewed.

Strategies and Payoffs of the Local Government

Previous studies suggest that the government's utility functions may be based upon two stylized objectives. One is that governments seek to maximize their revenue surplus (e.g., Levi 1988; North 1981; Olson 1993). Officials then can use this surplus to pursue whatever aims they have, regardless of whether they are public or private, whether they are legal or illegal, and whether they are appropriate or inappropriate for some criteria. The second objective is that governments maximize support from citizens (e.g., Ames 1987; Frieden 1991; Geddes 1994). The argument for this objective suggests that in order to seek to maximize revenue surplus, officials need to stay in power. Though in the authoritarian regime, Chinese local officials also have an incentive to obtain support from ordinary people to stay in power. Moreover, because of the authoritarian regime, they are particularly afraid of the public expression of dissatisfaction in a way visible to higher authorities. Thus, they are afraid of petitions to be reviewed, which will lead to punishment through the personnel system. To maintain generality of the model, I assume that local officials maximize their local government's revenue surplus, minimize their chance of being punished, or pursue some combination of the two (e.g., Treisman 1999).

The model assumes that a local government will maximize the revenue surplus that can be used unproductively and often privately (i.e. $T - G$).⁷ At one level, public funds are indeed used for private purposes—in a word, corruption (Lü 2000; Wedeman 1997). Taking advantage of being in power, local officials can use the revenue surplus for building a fancy office, purchasing

⁷ At the same time, the model normalizes the local government's payoff from the villagers' migration as 0. This normalization does not mean that the local government will completely lose their revenue source, but implies that it will not have sufficient revenue to generate the surplus that can be used unproductively for their private purposes.

a luxurious sedan, or capitalizing their private expenses in the government's account (or simply saying, eating and drinking with the government's budget).

However, at another deeper level, local officials seek to maximize the revenue surplus for an institutional reason. If villagers migrate and resist paying levies, local officials will have a strong incentive to maximize the excess revenue and use it for filling the fiscal gap between the amount they are supposed to collect and the amount they actually collect. This is because the Budget Law requires that local governments make ends meet every year, and higher-level governments often use the achievement of a balanced budget as one of the major criteria to decide promotion or demotion of local officials (Edin 2003; Wedeman 2000).

If a petition is reviewed, higher authorities will send a delegation to investigate the locality where the petition is originated. Then, if higher authorities conclude that levies are too high and/or the local government's revenue is spent inappropriately, they will do the following two things. First, they will punish the local officials and perhaps demote them. The "pain" the local officials feel from being punished is measured as ρ .⁸ Second, higher authorities may order the local government to return excess amounts to the villagers. Thus, if the petition is reviewed, the local government will lose the amount of the revenue not spent on providing public goods and suffer from the negative payoff of the pain. In other words, if petitioning is successful, the local government's payoff will be $-\rho$ (i.e. $T - G - \rho = -\rho$ when $T = G$).⁹

⁸ The model assume that $\rho > 0$.

⁹ When the villagers write a petition, formal rules state that local officials should be punished for the accuser's claim only when it is determined that they commit an inappropriate act such as corruption. In reality, however, most of the local officials I interviewed believed that petitions would be just as serious an indictment on their performance as riots. Therefore, in the model of this article, ρ is charged to the

Strategies and Payoffs of the Villagers

The villagers' utility is positively related to their disposable income and negatively related to the cost from migration or petitioning. The model assumes homogeneous villagers. This assumption implies that payoffs from the possible outcomes of the game have equal value to all the villagers, and benefits and costs are distributed evenly. Especially, it implies that the model does not specifically define the cost to solve the collective action problem. Obviously, this is not always the case, and a possible extension of this work would be to explore the implications of heterogeneous villagers.¹⁰

The model defines the benefit of staying in the local village as $\alpha + \delta \bar{G}$. The value of δ depends on the efficiency of public investment in the village. Thus, a larger value of δ indicates that the village has greater potential for development. If the villagers choose not to migrate, they can enjoy the fruits of the provided public goods while paying the entire amount of the tax levied by the local government. Their utility from staying in the village is hence $\alpha + \delta \bar{G} - T$.

If the villagers choose to migrate, they will receive the exit payoff, E . The model assumes that the exit payoff can be either positive or negative (i.e. $-\infty < E < \infty$). The villagers may benefit from migration, since they will have an access to a larger amount of incomes by working in a city and will be able to resist paying the agricultural tax in their local village. At the same time, migration is costly, especially because migration is still restricted even though its regulation has been relaxed for the last three decades.

local government once the petition is reviewed.

¹⁰ Since this assumption is potentially more problematic than other assumptions, I will informally relax this assumption in Implications.

If the villagers choose to petition, they will pay a cost, θ .¹¹ One of the primary costs associated with petitioning is the possibility that a local government retaliates. Petitions are not anonymous and local officials have been known to exact retribution on informants.¹² Another cost of petitioning is based on the difficulty for ordinary people to learn the laws and regulations to prove that the demands in their petition are legitimate. If the petition is reviewed, higher authorities will rule that the local government return to the villagers the excess amount of tax revenue that has not been spent on providing public goods. In this situation, the villagers get the value of δG (i.e. $\delta G - T = \delta G$ if $T = G$) minus θ . If the petition is ignored, the villagers will have the option of complying or migrating. If the villagers choose to migrate at the final decision node, they will gain the exit payoff minus the cost of petitioning (i.e. $E - \theta$). If they choose to stay in the village, they will gain the utility from compliance and pay the cost of petitioning (i.e. $\delta G - T - \theta$).

Solution to the Model

This part presents the solution and main results of the model. Solving by backward induction, I first consider the villagers' subgame. Depending on the values of the parameters of G , T , E , δ , θ , and q , there are four Nash equilibria in pure strategies. Each of the four outcomes can be

¹¹ The model assumes that $\theta > 0$.

¹² For example, when a group of petitioners from Anhui Province went to Beijing to bring their complaints about taxation to the central government, local officials beat them when they returned home (Chen and Wu 2004, chapter 4). More examples are reported on the Internet. One of the cases is that a petitioner from Sichuan Province was beaten by local officials after he returned from petitioning in Beijing. See <<http://www2.chinesenewsnet.com>>, accessed on November 21, 2004.

sustained as equilibrium given the certain specific conditions. The conditions are derived from the extensive form of the game shown in Figure 1, which is solved in terms of G . Below, I list the equilibria with their required conditions.

(1) The case in which the villagers choose to comply will be an equilibrium if: $G \geq \underline{C} + E \text{] } \underline{C} + \delta \text{]}$ and $G \geq T - \theta/q$. (2) The case in which the villagers choose to migrate will be an equilibrium if: $G \leq \underline{C} + E \text{] } \underline{C} + \delta \text{]}$ and $G \leq \underline{C} + E + \theta \text{] } q\delta$. If the villagers choose to petition at their first node, they will select either to comply or migrate at their second node after their petition has been ignored. Each of the following strategies is sustained as equilibrium in response to the local government's decision on the value of G . (3) The case in which the villagers first petition and then comply will be an equilibrium if: $G \geq \underline{C} + E \text{] } \underline{C} + \delta \text{]}$ and $G \leq T - \theta/q$. (4) The case in which the villagers first petition and then migrate will be an equilibrium if: $G \leq \underline{C} + E \text{] } \underline{C} + \delta \text{]}$ and $G \leq 1 - E - \theta/q$.

Given the villagers' subgame equilibrium strategies, how will the local government set G to maximize its utility? The local government will select a minimum expenditure for providing public goods within the possible range specified by the villagers' subgame equilibrium strategies. The local government's choice depends on two things: first, how the villagers value the benefits of migration relative to staying in the village; and second, the beliefs of the local government and the villagers about the cost of petitioning. The values of E and θ/q define the bounds within which each of the equilibria from the villagers' subgame is also a Nash equilibrium in the full game. Since my goal is to explore how the institutional changes on migration and petitions affect the dynamics of the use of power and influence between the villagers and the local government, I first consider the extreme case where neither migration nor petitioning is a credible option for the villagers to raise their demands for the local government. I then consider

the case where either migration or petitioning is a credible option but the other is not. And then, I compare the equilibria of these cases with the equilibria of the cases where both migration and petitioning are credible options, so that I could see how behavior and outcomes change when migration and petitioning are allowed. In practice, to capture the cases where migration and petitioning are not credible options, one does not have to solve an entirely new game. Exploring the equilibria where the parameters E is very low and θ/q is very high while all other assumptions as given respectively generates the implications of the model when migration and petitioning are too costly to be credible options.

First, if the exit payoff is very low and petitioning is very costly (i.e. $E \leq -T$ and $\theta/q \geq T$)—and hence neither migration nor petitioning is a credible option—the local government will choose not to provide public goods at all (i.e. $G = 0$). There is nothing that the villagers can do about the local government’s predatory behavior, and the villagers will hence comply.

Second, if migration is a credible option but petitioning is not (i.e. $E \geq -T$ but $\theta/q \geq T$), the local government will provide public goods under a certain condition (i.e. $G = \frac{C + E}{C + \delta}$ if $-T \leq E \leq \delta T$). Moreover, the local government will increase the provision of public goods as the exit payoff goes up. At this equilibrium, the villagers will comply. This equilibrium outcome is consistent with Tiebout’s (1956) “voting with your feet” argument that the local government should respond to the exit threat of the taxpayers and provide public goods to keep them in the locality. However, interestingly, the local government will switch its strategy to the predatory option of not providing public goods and enduring the villagers’ migration, if the villagers’ exit payoff is larger than a certain threshold (i.e. $G = 0$ if $E \geq \delta T$). This equilibrium outcome implies that when an increase in the expenditure for providing public goods has brought the local government close to an undesirable threshold, the local government will stop accommodating the

villagers with public goods. When this undesirable threshold comes depends on the local economic conditions. In the areas where the provision of public goods leads to local development more effectively (i.e. the value of δ is high), the threshold will be reached later. Moreover, in the areas with a higher value of δ , an increase in the provision of public goods along with an increase in the exit payoff is less sharp; however, the local government will be less likely to stop providing public goods even if the exit payoff is very high.

Third, if petitioning is a credible option but migration is not (i.e. $\theta/q \leq T$ but $E \leq -T$), the local government will also provide public goods under a certain condition (i.e. $G = T - \theta/q$ if $T \geq \theta/q \geq \left(-q\bar{T} - q\rho \right)$). The local government will increase the provision of public goods as the cost of petitioning goes down. At this equilibrium, the villagers will not petition but comply since they are satisfied with the local government's response of providing public goods. This equilibrium outcome is consistent with the idea McCubbins and Schwartz (1984) define as the "fire alarms" oversight. The local officials are afraid of *potential* petitions and as a result, they will provide public goods and the villagers will not petition. However, like the case of an increase in the exit payoff, the local government will stop providing public goods if the cost of petitioning is smaller than a certain threshold (i.e. $G = 0$ if $\theta/q \leq \left(-q\bar{T} - q\rho \right)$). This equilibrium outcome also implies that when an increase in expenditure for providing public goods has reached an undesirable threshold, the local government will stop providing public goods and endure petitions. Similar to the case of an increase in the exit payoff, when this undesirable threshold comes depends on the local economic conditions, but for a slightly different reason from the case of an increase in the exit payoff. When the threshold comes depends on how much "pain" local officials feel from the punishment induced by reviewed petitions. At the model's equilibrium, the threshold will be reached sooner if the pain is lower.

In other words, if local officials have larger incentives to stay in office, they are more likely to react to potential petitions by providing public goods, so that they could prevent petitions from being turned in.

Finally, if migration and petitioning are both credible options (i.e. $E \geq -T$ and $\theta/q \leq T$), what will be sustained as equilibria? To answer this question, one can derive the maximum value of the local government's utility for each of the villagers' four subgame equilibrium strategies. The local government might choose: (1) providing public goods to induce the villagers' compliance (i.e. $G = T - \theta/q$ or $G = \mathbf{C} + E \mathbf{J} \mathbf{C} + \delta \mathbf{J}$);¹³ (2) enduring the villagers' migration without providing public goods (i.e. $G = 0$); (3) providing public goods to induce the villagers' compliance if the petition is ignored (i.e. $G = \mathbf{C} + E \mathbf{J} \mathbf{C} + \delta \mathbf{J}$); or (4) not providing public goods to get a petition, expecting the villagers to migrate if the petition is ignored (i.e. $G = 0$). Substituting these values of T and G into the utility functions of the local government's payoffs (U_L), we get:

$$\text{maximum } U_L \text{ for (1)} = \theta/q \text{ or } \delta T - E$$

$$\text{maximum } U_L \text{ for (2)} = 0$$

$$\text{maximum } U_L \text{ for (3)} = \mathbf{C} - q \mathbf{J} \delta T - E \mathbf{J} \mathbf{C} + \delta \mathbf{J} - q\rho$$

$$\text{maximum } U_L \text{ for (4)} = -q\rho$$

Of these four utility functions, the local government will not select (2) unless the exit payoff is so high that the local government gives up its effort to keep the villagers to stay in the village by providing public goods (i.e. $\theta/q \geq 0$ and $\delta T - E \geq 0$ as long as $E \leq \delta T$).¹⁴ Moreover, the local

¹³ $G = T - \theta/q$ if $E \leq \delta T - \mathbf{C} + \delta \mathbf{J} \theta/q$, and $G = \mathbf{C} + E \mathbf{J} \mathbf{C} + \delta \mathbf{J}$ if $E \geq \delta T - \mathbf{C} + \delta \mathbf{J} \theta/q$.

¹⁴ However, the local government will choose point (2) if $E \geq \delta T$.

government will never select (4) under any condition (since $-q\rho$ is smaller than 0 under any condition).

Since the local government will never take point (2) or (4), the local government will make a decision between point (1) and point (3). If the exit payoff is higher than a certain threshold (i.e. $E \geq \delta T - (c + \delta \theta/q)$), the local government will provide public goods to keep the taxpayers to stay in the village and increase the provision of public goods along with an increase in the exit payoff (i.e. $G = c + E - (c + \delta \theta/q)$). If the exit payoff is lower than the threshold and the pain felt from punishment is higher than a certain threshold (i.e. $\rho \geq (k - q)(\delta T - E - (c + \delta \theta/q) - \theta/q)$), the local government will increase the provision of public goods, because of the fear of potential petitions, along with a decrease in the cost of petitioning (i.e. $G = T - \theta/q$). If the pain from punishment is lower than the threshold,¹⁵ since local officials are afraid of neither migration nor petitions, they will only provide a small amount of public goods and endure a petition, expecting that the villagers will comply if the petition is ignored (i.e. $G = c + E - (c + \delta \theta/q)$).¹⁶

MIGRATION, PETITIONS, AND THE PROVISION OF PUBLIC GOODS

Now I assess the effect of the two institutional reforms—the relaxation of state migration policies and institutionalization of the petition system—on the provision of public goods in rural China. Effects of these institutional reforms can be analyzed as how changes in certain parameters would affect the equilibria. Below, I assign certain values to the parameters in the

¹⁵ Note that $E \leq \delta T - (c + \delta \theta/q)$ if $\rho \leq (k - q)(\delta T - E - (c + \delta \theta/q) - \theta/q)$.

¹⁶ Since the value of E is small, the amount spent for providing public goods ($G = c + E - (c + \delta \theta/q)$) is also small.

game and examine how changes in the values of certain parameters would affect the value of the local government's expenditure for providing public goods at equilibrium.¹⁷

Effects of Migration on the Provision of Public Goods

One of the most significant changes that appeared in China's rural areas during the post-Mao reform is of villagers having the ability to earn non-agricultural revenue and migrate to urban areas. With this change, the proportion of the agricultural labor force to the total labor force dropped from 74 percent in 1978 to 60 percent in 1988 and to 50 percent in 1998. Moreover, the number of urban workers with the rural household registration was less than 2 million in 1983, 9 million in 1987, and 40-50 million in 1994 (Cui 2004, 9). Initially, in the 1980s, as rural industry prospered mainly in coastal regions, many villagers started working in local factories while continuing to reside in their villages.¹⁸ Then, this trend changed in the early 1990s, when enterprises in the coastal provinces demanded an increasing work force and hence many migrant workers left their local villages to stream into large cities. Once a significant number of migrant workers flowed into urban areas, more migrants came into cities using the social networks created by those who had already been in the cities (Solinger 1999, chapter 5; Zhang 2001, chapter 2). With these economic and social mechanisms, the number of migrant workers skyrocketed in the early 1990s.

¹⁷ Though altering parameter values change numerical results, it does not necessarily change substantive results.

¹⁸ For example, in Dongguan Prefecture of Guangdong Province, where rural industry prospered earliest and with the fastest pace in the 1980s, 72 percent of the labor force was from inside Guangdong Province in 1988 (Cui 2004, 10).

The relaxation of migration policies can be modeled as an increase in the value of E (the exit payoff). Figure 2 presents the effects of an increase in the exit payoff on the local government's provision of public goods. To illustrate, I offer a numerical example. I first assign $T = 1$ to the local government's tax revenue for the agricultural villages. I assign $\delta = 0.2$ for the villages with low potential for development and $\delta = 0.8$ for those with high potential for development. Then, to examine the effects of an increase in tax revenue along with development, I assign $T = 2$ for the villages that have already been industrialized.¹⁹ Before the post-Mao reform started in the early 1980s, rural-to-urban migration was practically prohibited and the petition system was not working effectively (i.e. $E \leq -T$ and $\theta/q \geq T$). Moreover, few villages—if at all—were industrialized at the beginning of the post-Mao reform.²⁰ Thus, at the start of the post-Mao reform, the equilibrium sat at the lower-left corner of Figure 2; hence, the local government will not provide public goods ($G = 0$ if $E \leq -T$) and the villagers will comply at this equilibrium.

[Figure 2 about here]

Figure 2 illustrates that an increase in E would increase local government's expenditure for providing public goods (i.e. $G = \lfloor \frac{E + T}{\delta} \rfloor$ if $-T \leq E \leq \delta T$), since the local government would be more inclined to assuage the villagers once their ability of *potential* migration has increased their leverage vis-à-vis the local government. At this equilibrium, the villagers will comply, satisfied with the local government's provision of public goods.

¹⁹ I assign $\delta = 0.8$ for the post-industrialized villages.

²⁰ For example, in S Village in Guangdong Province, which started industrialization very early compared with other regions, there were no factories, and fiscal revenue completely relied on the agricultural levies in the late 1970s. In contrast, now S Village has 40 factories, and fiscal revenue mostly relies on the corporate taxes.

However, as an increase in the expenditure for providing public goods reached an undesirable threshold, the local government will stop providing public goods (i.e. $G = 0$ if $E \geq \delta T$). Once the local government has stopped providing public goods, the villagers will start migrating. Actual migration makes it easier for non-migrant villagers to resist paying levies. However, since local officials have to achieve a target amount of tax collection and make ends meet every year, they levy more on each non-migrant villager as outbound migration increases. In other words, three things will happen at this equilibrium: (1) more and more villagers will migrate; (2) local governments will not provide public goods; and (3) the per capita financial burden of non-migrant villagers will increase.

This predicted series of events, not so coincidentally, corresponds with what happened in rural China in the 1980s and 1990s. When villagers obtained the ability to migrate from the village in the 1980s, they actually *stayed* in the village and worked in local factories of rural industry. In the meantime, local officials started to provide public goods and play the role of local government entrepreneurship for a rapid upsurge of rural industrialization in the 1980s. Local governments had clear financial incentives and strong interests in development of rural industry (Walder 1995). However, as expenditure for providing public goods to develop the local economy increased, local officials in less developed regions found it difficult to catch up the pace to keep their rural industry competitive. Due to surging competition among rural industrial firms in the 1990s, many local governments in less developed regions were no longer able to expect profit from rural industry and had to depend primarily on exactions from peasants for financing their budgets. Then, local officials decided not to play entrepreneur or developmental roles but to play predatory roles, faced a large scale of outbound migration of the villagers, struggled to collect taxes and fees from increasingly mobile villagers, and imposed heavier

financial burdens on those who remained behind.

The model also suggests that rural industrialization will have complicated and heterogeneous effects on the local government's provision of public goods. First, as Figure 2 shows, the local government will increase the provision of public goods *more rapidly* in the villages with *lower* potential for industrialization than in the villages with higher potential. However, it will reach the undesirable threshold to stop providing public goods *sooner* in the villages with lower potential than in the villages with higher potential. Second, since enterprises of rural industry pay the corporate taxes, tax revenue (T) will increase along with rural industrialization. In Figure 2, this occurs as the shift from the high potential village to the post-industrialized village. Once tax revenue reaches high enough a level, the local government will never reach the undesirable threshold but keep increasing the expenditure for providing public goods along with an increase in the exit payoff (i.e. $G = \bar{C} + E \int \bar{C} + \delta \bar{C}$ if $T \geq E/\delta$).

One can interpret the shift to a steady increase in the provision of public goods as what Oi (1999) terms as the “takeoff” of rural China. In many villages of the coastal provinces, the local government's initial provision of public goods in the 1980s effectively led to rural industrialization, which provided the local government with sufficient revenue sources to keep increasing the provision of public goods and brought further industrialization and prosperity to the villages. In contrast, the equilibrium at which the local government will stop providing public goods once it has reached the undesirable threshold corresponds with the argument that “only a subset of all townships and villages in rural China were able to ‘take off’” (Bernstein and Lü 2003, 70). In the hinterlands of the inland provinces, the initial provision of public goods led to rural industrialization very slowly if at all. Then, the local officials faced a lack of financial revenue to catch up the pace of modernization and had to secure financial resources to meet the

target of development programs imposed by higher authorities by squeezing the non-migrant villagers.

Effects of Petitions on the Provision of Public Goods

The petition system was in a state of flux at the outset of the post-Mao reform in 1978. Due to the instability and social chaos, organizations for the petition system did not function properly during the Cultural Revolution (1966-76). Formal complaint bureaus and specialized offices were since to be rebuilt and reconstituted in each local government (Luehrmann 2003). Thus, one can say that the cost of petitioning (defined as θ/q in the model) was very high at the beginning of the post-Mao reform. However, as reform-related discontent increased in the late 1980s, the Chinese leadership became increasingly concerned with rural instability and actively sought to resolve it with establishing political institutions. The National People's Congress, for example, adopted the Agricultural Law in 1993, which was designed to protect rural residents from the local government's illegal exactions, "[as] a wave of rural disturbances prompted regime action" (Bernstein 1999, 212). The law formed the basis for the petition system and other means of political participation in rural China.

The institutionalization of the petition system can be modeled as a reduction in the value of θ .²¹ Figure 3 presents the effects of a decrease in the cost of petitioning on the local

²¹ Alternatively, one can assume that the probability that higher authorities review a petition will be higher along with institutionalization of the petition system. Formally, this can be modeled as an increase in the value of q . However, this assumption is less plausible than the interpretation here that the cost they have to pay when they petition will drop along with institutionalization of the petition system. It is not plausible to assume that higher authorities can control the number of petitions; hence q may drop even

government's provision of public goods, depending on the values of the exit payoff (E) and available tax revenue (T), potential for development (δ), and the pain the local officials would feel from punishment (ρ). I assume that T , δ , and ρ would be higher in richer villages. While the assumption regarding T and δ would be straightforward, the one regarding ρ might need an explanation. This assumption implies that local officials believe that the pain of punishment should be larger in richer villages. While local officials may have good access to the profit from land expropriation, the privatization of rural industrial firms, or some other financial sources in the rich villages (e.g., Li and Rozelle 2003; Unger 2002, chapter 8), local officials in poor villages often suffer from the burdens of collecting taxes and fees, achieving a balanced budget, and repaying a huge debt (e.g., Lin. Li 2007; Oi and Zhao 2007). In short, being a local official would be a lucrative job in rich villages while it would be a losing job in poor villages. In other words, local officials should feel the bigger pain from being demoted in richer villages.

[Figure 3 about here]

Figure 3 illustrates that a decrease in the cost of petitioning (θ) would increase the local government's expenditure for providing public goods in the rich villages. In the rich villages, where the value of ρ is high (i.e. $\rho \geq \left(-q\bar{T}/q\right)$, regardless of whether the villagers have credible exit threat, the local government will increase expenditure for providing public goods along with a decrease in the cost of petitioning. Meanwhile, in the poor villages, where the value of ρ is low (i.e. $\rho \leq \left(-q\bar{T}/q\right)$, the local government's expenditure for providing public goods will not change even if the cost of petitioning decreases. In the poor villages, interestingly, the local government will expend more on providing public goods in the cases where the villagers do

when higher authorities raise the *number* of petitions to be reviewed, because they may face a flood of petitions.

not have credible exit threat than the cases where they have credible exit threat.²² In the rich villages, in contrast, the local government will expend more on public goods in the cases where the villagers have credible exit threat than the villages where they do not have credible exit threat.²³

The villagers' reactions at equilibrium are also interesting. Except for the case where the exit payoff is very high (i.e. $E \geq \delta T$), the villagers will mostly comply whenever the local government provides public goods.²⁴ The only case where the villagers will not comply despite the local government's provision of public goods is that the villagers will petition under the condition that the cost of petitioning is very low (i.e. $\theta/q \leq \frac{E - \delta T}{\delta} + q\rho$). In this case, interestingly, the low cost of petitioning will result in a *drop* in the provision of public goods in both rich and poor villages.²⁵ Once the villagers have petitioned, they will comply even if the petition is ignored.

In sum, the model generates the following predictions. First, *ceteris paribus*, a richer village

²² For a numerical example assigned in Figure 3, expenditure for providing public goods in the poor villages is mostly 0.4 without exit threat but 0 with exit threat.

²³ Strictly saying, the local government will expend at least the same (if not more) amount on providing public goods in the cases where the villagers have credible exit threat to (than) the cases where they do not have credible exit threat.

²⁴ The villagers will migrate if $E \geq \delta T$.

²⁵ For a numerical example assigned in Figure 3, expenditure for providing public goods drops from 1.9 to 0.8 once the cost of petitioning has become lower than a certain threshold (i.e. $\theta/q = 0.08$) in the rich villages, while expenditure drops from 0.7 to 0.4 once the cost has become lower than another threshold (i.e. $\theta/q = 0.29$) in the poor villages.

will have a local government spend more on providing public goods; and more importantly, the local government will increase expenditure for providing public goods along with a decrease in the cost of petitioning. In the rich villages, where serving as a local official is so desirable that officials fear the punishment from petitioning, officials will appease the villagers with increasing expenditure for providing public goods, so that they could avoid petitions. Second, less intuitively, *ceteris paribus*, the poor villages *without* credible exit threat will have local governments spend *more* on providing public goods than the poor villages with credible exit threat. Where the villagers do not have credible exit threat, the local government may collect taxes relatively easily, have more financial resources to provide public goods and hence, increase expenditure for providing public goods to avoid petitions. In many ways the logic here is equivalent to the theory developed in the model by Clark et al. (2007, 27), implying: “dictatorships where citizens have no credible exit threat should perform relatively well since citizens have little option but to continue investing, making the best of what they have and hoping that the state does not predate too much. In contrast, dictatorships where citizens have credible exit threats will perform poorly since the citizens will redeploy their assets elsewhere to avoid state predation.”

The model’s prediction implies that *potential* petitions will give local officials an incentive to *increase* the provision of public goods while *actual* petitions will result in a *decrease* in the provision of public goods. When potential petitions increase the local government’s provision of public goods, the villagers will comply and enjoy the benefit of the provided public goods. However, when the cost of petitioning is so low that the villagers actually petition, the local government will stop appeasing the villagers with providing public goods, betting on the chance for the petition to be ignored. The model’s implication comports with what has promised to

bedevil the Chinese leadership in the twenty-first century: how to defuse the villagers' grievances where the petition system does not work to get local officials responsive.

CONCLUSION

The model suggests that rural-to-urban migration and the petition system will strengthen power of rural dwellers vis-à-vis the state by giving local officials an incentive to provide public goods. However, this incentive will be sustained in a long run only in the villages that have high potential for development. Allowing outbound migration will initially give local officials everywhere an incentive to increase the provision of public goods to prevent the villagers (taxpayers) from migrating. However, local officials will soon find it unable to keep up the pace to develop by increasing the provision of public goods in the villages where public investment does not effectively lead to development. Moreover, the petition system will give local officials an incentive to increase the provision of public goods in the villages where officials benefit from local development and fear the punishment induced by petitions. In the villages that do not have high potential for development, not only the petition system will be ineffective to get local officials responsive but also outbound migration will further decrease the local government's provision of public goods. Together, the combination of the relaxation of migration policies and institutionalization of the petition system will increase the provision of public goods in the villages with high potential for development while it will decrease the provision of public goods in the villages with low potential.

The model developed here demonstrates a mechanism that may account for the mixed results of the association between migration and participation on the one hand and the local government's provision of public goods on the other hand. Allowing villagers to migrate and

petition will lead to different outcomes depending on potential for local development. The increasing possibility of migration and petitioning will give local officials strong incentives to provide public goods and to be responsive to popular preferences, so that they could keep villagers from outbound migration and avoid petitions, in the villages with potential for development. However, if the provided public goods does not lead to development effectively, local officials cannot sustain the provision of public goods, more and more villagers will migrate, and the increasing outbound migration will cause erosion of tax collection, which will make it even more difficult for the local government to provide public goods.

To conclude this article, I discuss the model's implications on what roles the petition system plays in China's rural politics. As I have shown, the petition system does not necessarily give local officials an incentive to be responsive to popular demands. Then, how does the petition system work (or fail to work) to strengthen power and influence of ordinary people vis-à-vis the authoritarian state in rural China? I answer this question from two perspectives: first, the ordinary people in rural China use the petition system to solve the collective action problem; and second, the central government uses the petition system to monitor local governments and strengthen its authority for the regime's survival.

Implications on the Collective Action Problem

The model's prediction suggests two interesting implications regarding the villagers' use of the petition system. First, the villagers should rarely use the petition system. It is not the actual petitions but the potential petitions that give local officials an incentive to provide public goods. Second, once the villagers have turned in a petition, they would stay in the village if the petition is ignored. This prediction comports with the cases of what O'Brien and Li (2006, chapter 4)

conceptualize as tactical escalation, where the disgruntled villagers start directly negotiate with their targeted local officials once they have found their petitioning not to have solved their problem. Why the villagers do not follow the petition rules but engage in direct negotiation with the targeted local government is not puzzling. Given the lack of mechanisms that may hold officials accountable to ordinary people, any strategy to follow the petition rules would be quite costly in various aspects—such as the direct costs induced from petitioning and the opportunity costs. However, why the villagers use the petition system before engaging in tactical escalation is puzzling.

Interestingly, contrary to the model's prediction, more villagers have used the petition system and more petitions have been submitted in the Chinese countryside.²⁶ In fact, this increasing trend of petitions is further puzzling with the fact that only 0.2 percent of the problems petitioned were resolved via the petition process in the same year the number of petitions and petitioners increased.²⁷ Thus, why do the villagers still use the petition system while its effectiveness is reasonably doubtful?

I answer this puzzle from the perspective of how people solve the collective action problem when they seek redress from the government. The mere existence of a group with a common interest does not necessarily give rise to collective action, but there must be an individual

²⁶ According to a report of the Chinese Academy of Social Sciences, in 2003 the number of collective petitions issued by groups of people to the State Council Petition Bureau increased by 41 percent while the number of people involved increased by 45 percent from the previous year. Moreover, the same report says that in the first quarter of 2004, the number of petition cases and petitioners to the State Council Petition Bureau increased by 99 percent and 95 percent respectively compared to the same period of 2003. See <<http://chinastudygroup.org>>, accessed on November 19, 2004.

²⁷ See <<http://www7.chinesenewsnet.com>>, accessed on November 5, 2004.

incentive or compulsion to join in (Olson 1965). Thus, the villagers would need to organize a well-motivated group, who must know that they share common interests, to strengthen their position when they directly negotiate with their targeted local officials. In the process of turning in a petition, the concerned villagers might figure out who would share the same grievances, who would be familiar with petition rules and relevant laws to justify their claim, and who could be a leader for their collective action. Thus, petitioning would be useful for the villagers to pursue their goal even if their petition is ignored.

Note: I do not claim that solution to the collective action problem is the only explanation on the use of the petition system in rural China. However, I argue that the institutionalization of the petition system has played a crucial and hitherto insufficiently understood role to make non-institutionalized political participation effective. Moreover, my argument is consistent with Li and O'Brien's (1996) argument that "policy-based resisters" have emerged in the Chinese countryside as leaders to lodge the villagers' complaints to higher authorities by using the petition system. In sum, the villagers turn in a petition though they do not expect the petition to resolve their disputes, but petitioning will help them solve the collective action problem; and they will stay in the village and directly negotiate with local officials after finding that the petition has not resolved their disputes.

Implications on the Regime's Survival

The model's argument suggests that though the petition system has not given local officials strong incentives to provide public goods in agricultural areas, it has apparently helped the central government strengthen its control over the local governments. Indeed, the fact that the local governments in agricultural areas, which used to rely on revenue from the agricultural taxes,

have faced the problem of inadequate revenue implies that local officials have complied with the implementation of the rural tax reform since 2000 that has abolished the agricultural taxes. This local government's compliance is striking because previous attempts of lowering the peasants' financial burden in the 1990s failed to have such a remarkable effect. Despite the consistent attempts for the central government to reduce the peasants' financial burden, anecdotal evidence from the likes of the statement of then Premier Zhu Rongji in 2001 and the report of the Ministry of Agriculture suggests—though there is no reliable data measuring the burden over time—that the burden grew during the 1990s (Bernstein and Lü, 2003: 52).

In the 1990s when many attempts for the central government to reduce the peasants' financial burden ended in failure, local governments were allowed to levy *legal* fees. Thus, they collected miscellaneous fees for superficially legal reasons even though many of the fees were in reality not used for those legally reasoned purposes. In contrast, now that a local government cannot levy miscellaneous fees—either legal or illegal—because the new regulation mandates that all fees should be integrated into the agricultural tax and the tax reform abolished the integrated agricultural tax, rural residents can easily see that the fee is illegal if the local government levies *any* fee. Before the tax reform, it was difficult for ordinary people to prove which fees were illegal and hence they often gave up petitioning. In contrast, now that local officials know that villagers can easily prove validity of their claims, being afraid of *potential* petitions, they cannot help but comply with reduction of levies.

In addition, through the institutionalization of the petition system, China's central government has strengthened ordinary people's power against the local governments. The model suggests logic that accounts for why the local governments in agricultural areas would stop providing public goods. By allowing rural residents to petition against local governments, the central

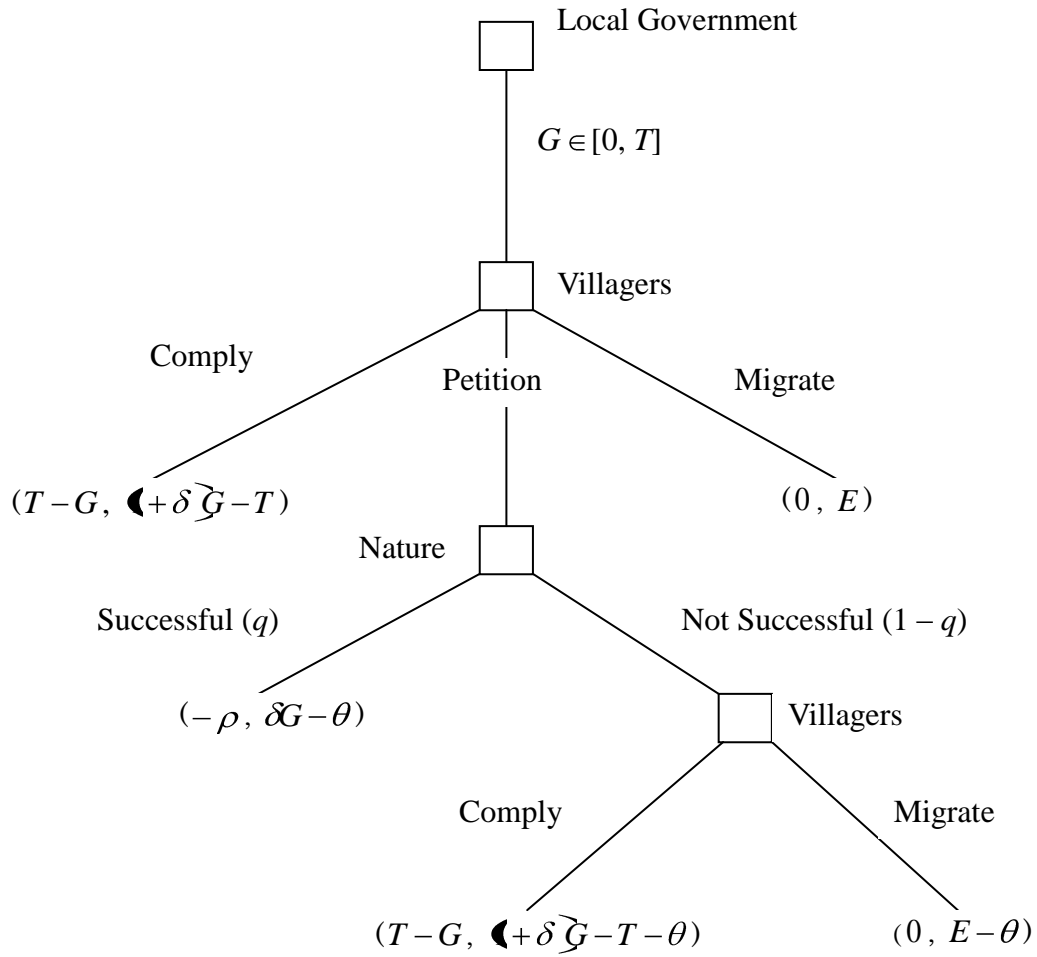
government has succeeded in castigating local officials for their failure to provide public goods. Villagers have now drawn sharp distinctions between local and central levels of government (e.g., Guo 2001; Lia. Li 2004). They believe that poor rural governance has occurred because local officials are inherently corrupt, not because they are facing serious fiscal crises that have more complicated institutional origins.

The reason rural residents have favorable views on the central government and blame local governments is because the center has a way to advertise its policy. The state media actively reports the center's apparent concerns with peasants' interests and its intention to introduce the policies favorable for peasants—such as the relaxation of migration policies, the appreciation of people's use of the petition system, and abolition of the agricultural taxes. The model's argument implies that all of these policies favorable for villagers have brought negative effects on local governments. Thus, the petition system has been useful for the central government to strengthen its authority and gain popular support at the cost of the local government's authority.

Finally, the model suggests that the Chinese central government's introduction of the two policies that are discussed in this article—the relaxation of migration policies and institutionalization of the petition system—is consistent with its seeking of the regime's survival. It is conventional wisdom that the authoritarian regime needs popular support to stay in power. However, the popular support the authoritarian regime needs is not limited to the votes needed to stay in office in the democratic regime. Indeed, the authoritarian regime often seeks an electoral victory by huge margins, much larger than the margin needed to win the majority of the parliamentary seats. Magaloni (2006) argues that this is because, in the case of the Mexican Institutional Revolutionary Party, the electoral result of the overwhelming majority has discouraged opponents from coordinating against the regime.

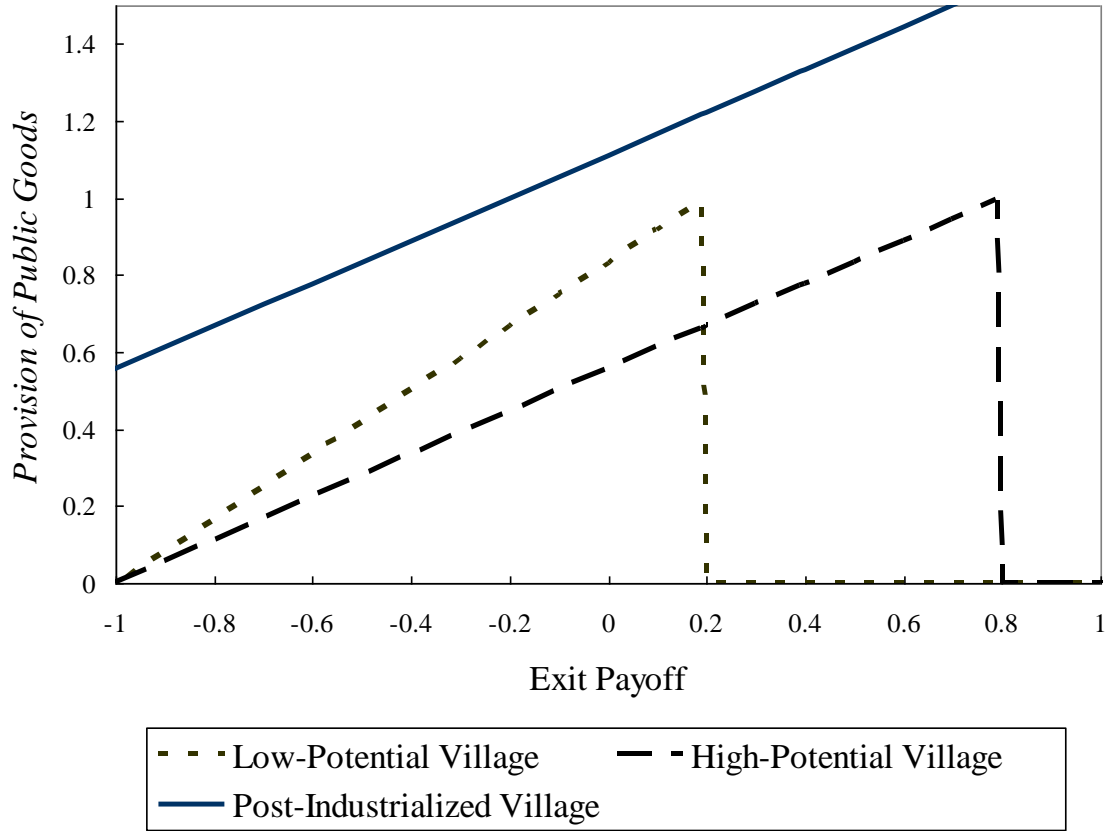
The Chinese central leaders have been haunted by the fear that they are losing popular support and their days in power are numbered, especially since the 1989 pro-democracy protests in Tiananmen Square and the fall of communism in the Soviet Union (Shirk 2007). The model suggests that allowing rural residents to migrate to urban areas and to petition against local governments has strengthened popular support for the central state at the cost of support for the local state, which arguably alleviated the Chinese leadership's fear of being ousted from power. However, sacrificing local authorities to strengthen central authorities is like killing a hen that has laid golden eggs. It was entrepreneurial local officials who played critical roles for China's rural industrialization. Without competent, empowered, and responsible local leaders, rural governance will continue to be the Achilles tendon of political stability. If the Chinese leadership wants to enjoy political stability in agricultural areas and maintain its authority as a ruling party in the long run, the answer lies not in undermining legitimacy of local governments but in expanding political institutions of democratic accountability to get local officials responsive to popular preferences.

FIGURE 1. Migration, Participation, Taxation Game



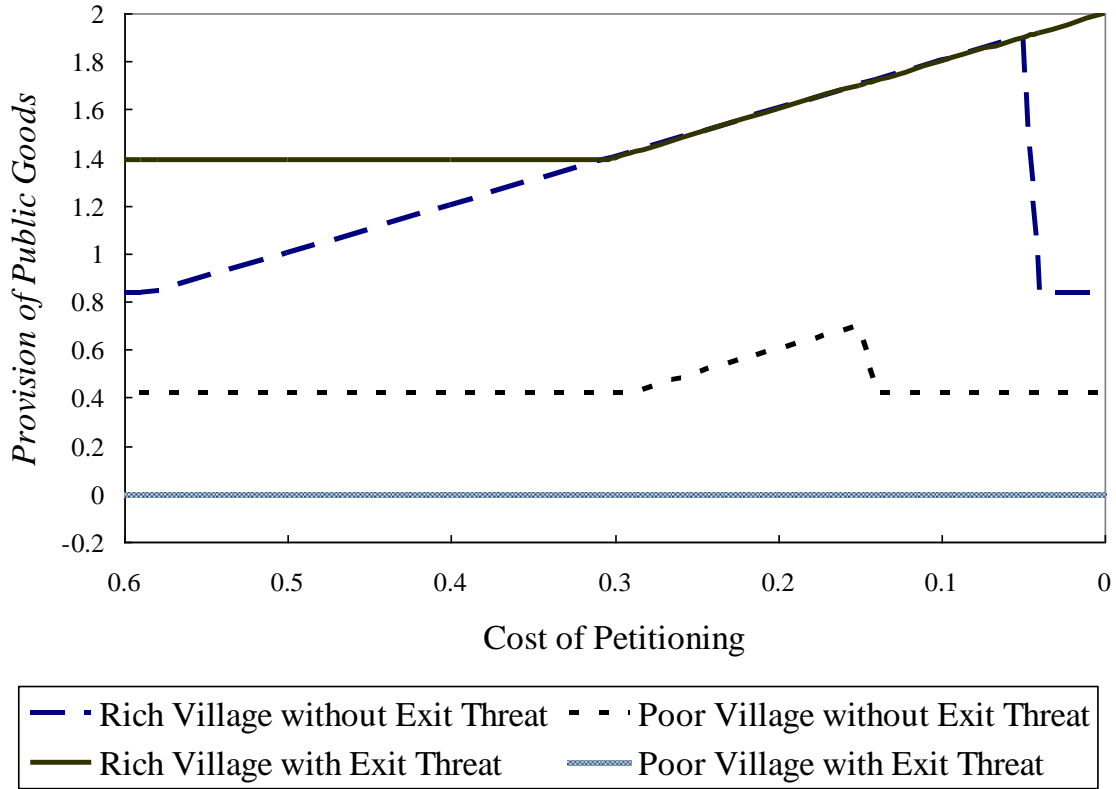
(Payoff to Local Government, Payoff to Villagers)

FIGURE 2. Effects of Migration on the Provision of Public Goods



Note: The article assigns $T = 1$ and $\delta = 0.2$ for the low-potential villages, $T = 1$ and $\delta = 0.8$ for the high-potential villages, and $T = 2$ and $\delta = 0.8$ for the post-industrialized villages.

FIGURE 3. Effects of Petitions on the Provision of Public Goods



Note: This article assigns: $T = 2$, $\delta = 0.8$, and $\rho = 1$ for rich villages; $T = 1$, $\delta = 0.2$, and $\rho = 0.01$ for poor villages. It also assigns $E = 0.5$ for villages with exit threat and $E = -0.5$ for villages without exit threat. For simplicity, It assigns $q = 0.5$ for all the cases.

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